



# The Impact of Innovation: The Rogers Story











Dear Rogers Global Employees,

This book is dedicated to you, in recognition of your contributions to Rogers Corporation.

As we reviewed early manuscripts of this book, a clear pattern emerged. Time and again, Rogers faced significant challenges. But world wars, natural disasters and global economic collapse could not stop us. Through innovation, talent and dedication, our employees helped the company reinvent itself, finding new avenues to growth and making some of the best materials in the industry to meet the needs of ever-evolving markets.

Today, Rogers' materials are found in products that people around the world use every day. Automobiles, wireless devices, wearable protection and so many other products are made better because they are enabled by Rogers' materials. Throughout our history, we have helped the world advance, making new technologies more available, reliable and durable.

We sincerely hope that you, like us, read this book with pride and appreciation for being part of a company that has helped shape the world we live in today. Thank you for carrying our tradition of resilience and ingenuity forward.

All our best,


A handwritten signature in black ink that reads "Bruce D. Hoechner".

Bruce D. Hoechner  
President and CEO (Ret.)  
Rogers Corporation

A handwritten signature in black ink that reads "Colin Gouveia".

Colin Gouveia  
President and CEO  
Rogers Corporation





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[www.CorporateHistory.net](http://www.CorporateHistory.net)

ISBN: 979-8-218-12052-8





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*"Rogers has a proud tradition of anticipating and adapting to changes in the world around us. And we've had a lot of practice! For 190 years, we have always looked to the future, identifying the dynamics and trends in markets and technologies to enable next generation solutions."*

—Bruce D. Hoechner  
President and CEO (Ret.)





For the past 190 years, six ideals have guided Rogers Corporation in their transformation from a small paper manufacturing company to a global leader in engineered materials that power, protect and connect our world.

Founder Peter Rogers recognized a need in the

Connecticut textile industry and, through hard work and **ingenuity**, set about to meet it.

His son, Henry Rogers, laid the groundwork for a culture of curiosity and **innovation**. Time

and again, fires, floods, ever-changing markets and financial crises forged a culture of **resiliency**

while at the same time, market dynamics demanded

**reinvention** to transform traditional

approaches and materials into new products to meet new

market needs. At every turn, the highest **ethical**

standards and expectations delivered results, but results the

right way. Above all, a **passion for people**, both the talented employees on the

Rogers team and the customers they serve, has helped people

live their best, both on and off the job.





## Chapter 1

# “A Poor Boy from Amsterdam” with a Big Idea

(1797-1899)

1797

Peter Rogers was born in 1797 in the Netherlands. By one account, he described himself as a “poor boy from Amsterdam,” but little else is known about his early life. He settled in East Hartford, Connecticut in the 1820s, married, and according to the 1830 census, had three children, including his son Henry, who seems to be the only child who survived into adulthood. Peter worked in the Butler Mill in Buckland and became a partner in 1825 with William Debit. In 1830, two years before opening Rogers Paper Manufacturing Company, he moved his family to Manchester.

Right: 1869 map of Manchester.  
Courtesy of Manchester Historical Society, Manchester, CT.



**MANCHESTER BUSINESS DIRECTORY.**

E.B. Hubbard, Agent Weed Sewing Machine Co. & Pianos. No. Manchester.  
 G.L. Tracy, Actua Life Ins. Co. So. Manchester.  
 J.O. Spencer, Station Agent, No. Manchester.  
 B.S. Colman, Attorney at Law, No. Manchester.  
 G.M. Spencer, No. Manchester.  
 C.H. Owen, Bucklands.  
 C.D. Parsons, Carpenter & Builder.  
 A. Skinner, No. Manchester.  
 A.L. Rockwell, No. Manchester.  
 J.E. Bigner & Mill Wright, No. Manchester.  
 W. Adams, Wheel Wright, No. Manchester.  
 S. Stone, Black Smith, No. Manchester.  
 D. Wadsworth, Manchester Green, No. Manchester.  
 S. Loomis, Machinist, No. Manchester.  
 E. Weaver Prop, Weavers Hotel, No. Manchester.  
 C.R. Andrews, Saloon, No. Manchester.  
 G.E. Parker, Dry Goods Groceries & No. Manchester.  
 Chas. Adams, Groceries, Meat Market, No. Manchester.

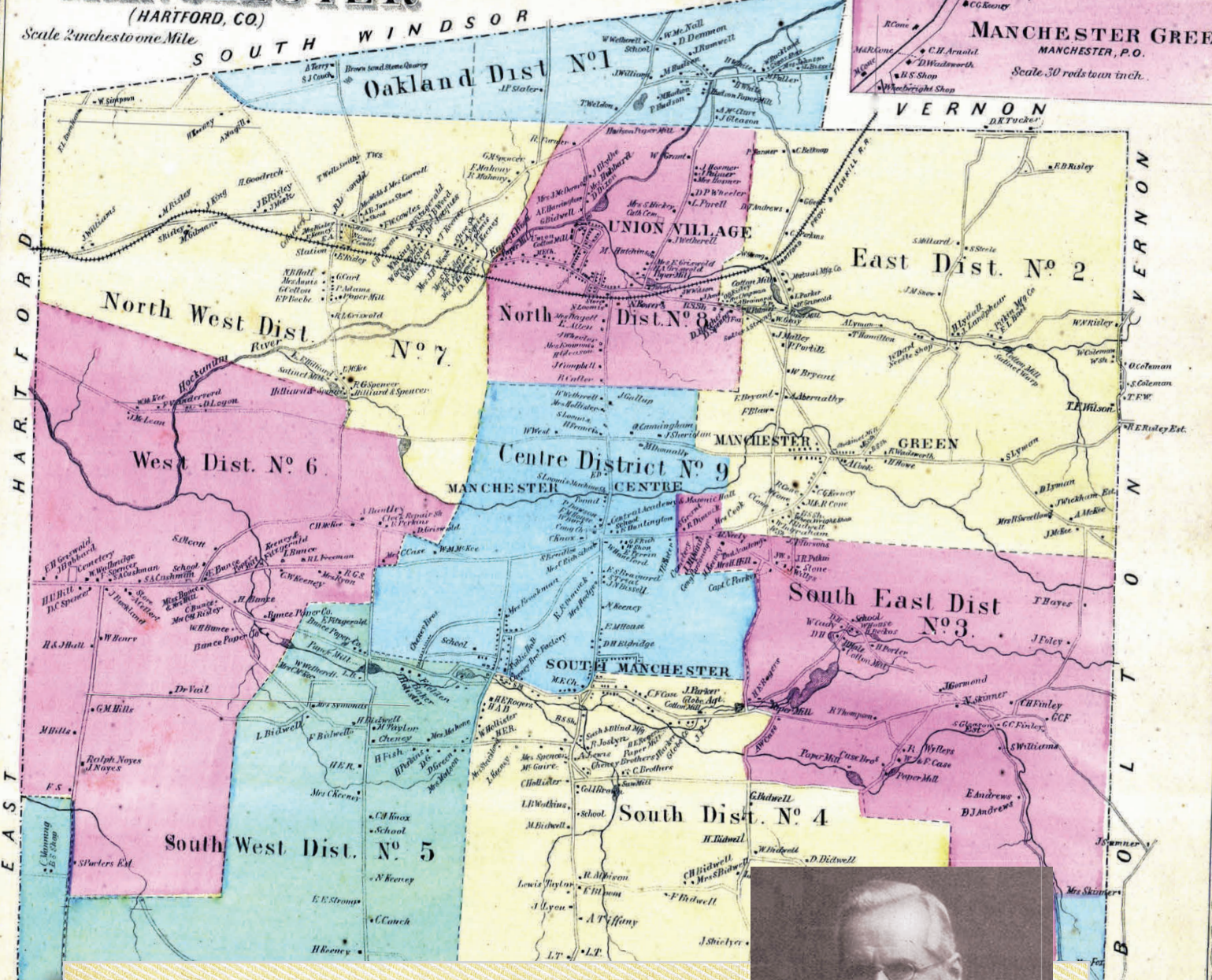
A. Mitchell, Stores & Tin Ware, No. Manchester.  
 F.T. Carrier, No. Manchester.  
 W.H. Cheney, Dry Goods, Groceries & Gens, No. Manchester.  
 E.M. House, Merchant Tailor, No. Manchester.  
 Moses Scott, Druggist, Books Stationery, No. Manchester.  
 E. Platch, Dry Goods Groceries, Boots & Shoes, No. Manchester.  
 Mrs. Horvce Fuller, Millinery & Dress Making, No. Manchester.  
 White Kenev & Co, Paper Manuf, No. Manchester.  
 Kenev & Wood, No. Manchester.  
 H.E. Rogers, No. Manchester.  
 Eames, Paper Co., No. Manchester.  
 Thomas Dunham, Apt. Waverly Paper Mill, No. Manchester.  
 W.E. Case, Manuf. Binders Boards, No. Manchester.  
 Sillers, Strong, Hardware, Gun Wad Paper and Paper Boxes & Gun Wadding, No. Manchester.  
 C.W. Strong, Silk Book, Futton Paper, No. Manchester.  
 M. Hudson & Son, Manuf. Bank Note & Bond Paper, No. Manchester.  
 Kenev & Fitzgerald, News & Book Paper, No. Manchester.  
 Case Brothers, Pressed Card Paper, No. Manchester.

Billings & Spencer, Manuf. Union Cassimeres, No. Manchester.  
 Joseph Parker, Apt. Globe Cotton Mills, No. Manchester.  
 L. Parker, Apt. Mutual Manuf. Cotton Mills, No. Manchester.  
 A.M. Stone, Apt. Union Manuf. Co., No. Manchester.  
 W. Norton, Apt. Union Manuf. Co., No. Manchester.  
 T.T. Puel, Apt. Pulin Manuf. Co. Cotton Warp, No. Manchester.  
 Harey Brothers, Stockinet, Mrs. Stone, Carriage Manuf, No. Manchester.  
 E.A. Bliss, & Wheelwright, No. Manchester.  
 M.E.R. Cone, No. Manchester.  
 R. Joslyn, Sash Blind & Door's Manuf., No. Manchester.  
 A. Mitchell, Mir. Mfg. Work of all kinds, No. Manchester.  
 J.C. Robertson, Harness Manuf., No. Manchester.  
 Cheney Bros, Silk Manuf., No. Manchester.  
 W. Scott, Physician & Surgeon, North, No. Manchester.  
 E.C. Burkhardt, Dentist, No. Manchester.  
 C.L. Arnold, Sign & Carriage Painter, No. Manchester.

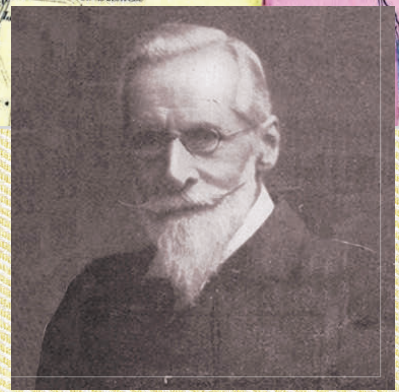
**MANCHESTER**

(HARTFORD, CO.)

Scale 2 inches to one mile



Despite common belief, this is actually not Peter Rogers but instead, British Chemist William Crookes. Legend has it that in the 1980s, Crookes' image was used as a placeholder in a company publication. An authentic image was never added, the placeholder was published, and for the last fifty years, Crookes has been a stand-in for Peter Rogers. At the company's 150th anniversary celebration, an actor who based his appearance on Crookes gave a dramatic reading of the company's history.



Sir William Crookes, 1906. Courtesy of the National Portrait Gallery, London.



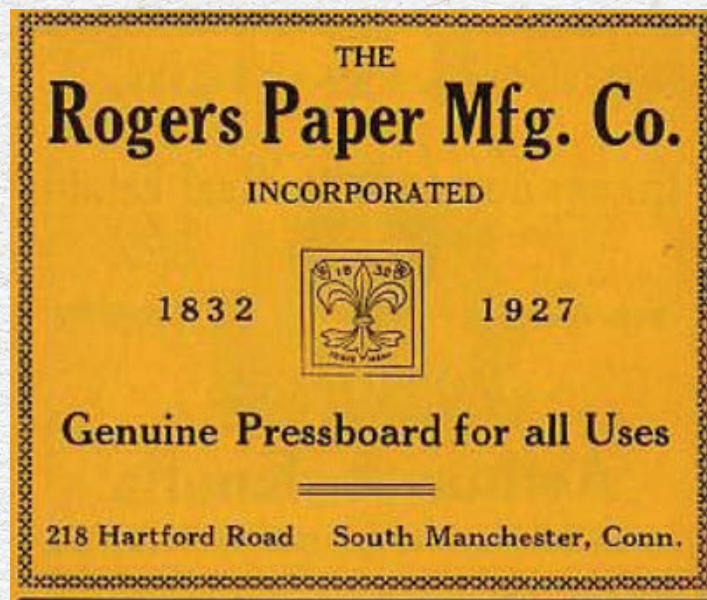
# Peter Rogers

(1832-1841)

**In 1832, the heyday of the Industrial Revolution, Dutch immigrant Peter Rogers had an idea. Rather than open a textile mill and compete with well-established businesses in the booming Connecticut textile industry, why not identify a need for that industry and then supply it with a product to meet that need? His answer? Paper. Paper to wrap clothing. Paper for newsprint. Paper for stationery.**



*Peter Rogers*



Peter Rogers leased a wooden, two-story powder mill on Hop Brook in Manchester, Connecticut, and soon, Rogers Paper Manufacturing Company was manufacturing one ton of paper a day. It was the first paper mill in Manchester; forty years later, there were ten mills in town.

Rogers' first paper was simple. Powered by the mill's water wheel, crude beaters crushed and blended woody fibers with water. The mixture was then spread onto flat beds of fine wire mesh and laid on the grass to dry, a primitive technique that actually produces high-quality paper. By the mid-1800s, Rogers had perfected a specialty cardboard ideal for use as collar stays, skirt stiffeners, lapels and coattails in men's suits. The business thrived, and in less than ten years, the company was shipping paper throughout Connecticut and New England.

Unfortunately, Peter didn't live to see his business enter its second decade. After a long illness, he died in 1841, his death "occasioned by a kick from a horse," leaving the company to his 19-year-old son, Henry.

Above: An early advertisement from the Rogers archives features the company's 1832 founding date and 1927 incorporation date.



# 1823

Henry Ellsworth Rogers is born. Known as "the energetic Mr. Rogers," he was quiet and reserved but active in the community and his church. He loved music and education and served as superintendent of the Methodist Sunday School. An amateur horticulturist, he could frequently be seen tending to the grounds of his home on Prospect Street.



# 1832

Peter Rogers starts Rogers Paper Manufacturing Company in Manchester, Connecticut.

# 1840

The Connecticut textile industry flourishes, with New England's rural waterfall sites and mill towns important centers of cotton manufacturing. By 1840, textiles become the leading U.S. industry.







# 1841

Peter Rogers dies. His 19-year-old son, Henry, inherits the business. When the lease expires on the Manchester Mill, Henry purchases the property. The Manchester Mill, also known as the Atlantic Mill, is located at the corner of Hartford Road and Prospect Street.

# 1849

Henry Rogers constructs a second mill, the Adriatic Mill, on Charter Oak Street, a mile-and-a-half away from the first mill. Paper is produced at the Atlantic Mill and then transported by horse and wagon to the Adriatic Mill for finishing. The mill is later sold to H.H. Ingalls and then to Cheney Brothers.

# 1852

Henry Rogers revolutionizes the papermaking industry by developing a process for bleaching printed paper so it can be reused. He does not apply for a patent but keeps the process secret for ten years.

Henry builds a third mill.

Above Left: Advertisement from *The Times and Hartford Advertiser*, September 1926, Hartford. Courtesy of ConnecticutHistory.org.

Above Right: The Killingly Manufacturing Company building that would become Rogers Corporation's home for decades in what is now Rogers, CT.

Left: The Manchester Mill, located on the corner of Hartford Road and Prospect Street.



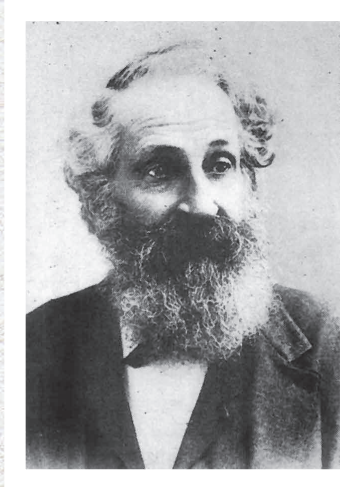
# Henry Ellsworth Rogers

(1841-1890)

**The first sparks of innovation at Rogers Corporation began with Henry Ellsworth Rogers. Henry grew up working in his father's paper mill, learning the craft of making paper and the art of operating a successful business. When his ailing father's condition worsened, Henry assumed management. By the time his father died in 1841, Henry had been running the mill for three years.**



## Henry E. Rogers



Henry Rogers from *The History of Manchester, Connecticut*, Mathias Spiess. Courtesy of Manchester Historical Society.

From the start, Henry Ellsworth Rogers had big dreams. The same year his father died, the lease expired on the Manchester Mill, so he purchased the property and proceeded to buy and build mills to add to the Rogers Paper Manufacturing Company. By 1900, the company was the third-largest in Manchester.

The company thrived under Henry's leadership, becoming one of the most respected companies in Connecticut. Understanding the merits of diversification, Henry looked for new ways to use his paper products. He produced pressboard for notebook covers and file guides as well as board used in textile finishing, index cards and other specialties. His most profitable product, candle board paper, was used to wrap candles and was in great demand before kerosene became popular in 1854.

Henry's biggest contribution was his discovery of an innovative way to remove ink from paper, a process that revolutionized the paper industry and ushered in early recycling practices. As a boy, one of his jobs at the mill was to sort colored paper from regular stock. It occurred to him that both money and labor could be saved if only the color could be removed from the paper. The idea percolated as he grew older, but it wasn't until years later that an offhanded observation sparked his curiosity.

As described in a September 24, 1891, article in *The Hartford Post*: "Mr. Rogers was a Methodist and loved singing as the most inviting of pastimes. One evening, while enjoying his favorite recreation, a hymn book fell into his hands on one of the covers of which were a number of discolorations that attracted his attention. The original blue of the cover had been removed in spots, leaving the paper perfectly white. He commenced tracing back the book to the publishers in Boston, believing that somewhere along the way he would discover the reason for the spots, which seems to hold the key to the discovery which had been the dream of his life. Two years had been spent in the search, when one morning, Mr. Rogers found himself in a Boston publishing house with the hymn book in his hands."



September  
24, 1891

Mr. Rogers commenced a series of experiments with colored papers that proved perfectly satisfactory, demonstrating that the process had been ascertained by which colored papers could be used in the manufacture of a white product. While engaged in making his tests, he accidentally found that printer's ink was as easily removed as the colors. This method was so simple that its committal to the Patent Office in Washington would have defeated the protection which he desired. He was compelled to trust to the loyalty of one or two employes, sharing the secret with them so far as it was necessary in carrying on his work. The selection of assistants was so skilful that he retained the monopoly of the process for ten years completely revolutionizing the paper industry.

When it became known that discarded newspapers and books could be utilized, the whole of Connecticut was ransacked by purchasers. Thousands of old books were sold for paper stock, many of which would be invaluable to collectors at present. A part of the original charter of the Connecticut Colony was found in the streets of this city, having dropped from a load of paper stock that was on its way through the town. It was not an uncommon thing to find volumes published anywhere through the seventeenth century, while publications of great interest issued in the sixteenth could be found in the stock that accumulated at the Rogers Mills. Mr. Rogers now has a Bible of considerable antiquity in his possession which was rescued from a lot of old paper that had been bought at half a cent a pound.

Toward the last of the ten years in which Mr. Rogers kept his secret from other paper manufacturers the trust which he had reposed in men closely identified with his work was betrayed, and the great secret which had netted him fortune and distinction began to leak out. When it is stated that potash was at the foundation of the process, it will seem a marvel that the secret could have been kept even for a year.

AN IMPORTANT DISCOVERY.

HOW AN ERROR REVEALED A VALUABLE NEW PROCESS.

It Was a Simple Thing But it Revolutionized the Paper Trade and Aroused all Connecticut.

A Hartford dispatch to the N. Y. Times says that one of the most important discoveries in the manufacture of paper was the result of a common accident. Old paper manufacturers will recall the excitement that prevailed in the business about 1852, when it was learned that a process had been found for utilizing newspapers and books as paper stock. Up to that period it had been impracticable to use old books and papers as stock, no way having been devised for the elimination of printer's ink. The history of the process by which this waste of old paper was prevented is soon to be given to the public by the discoverer, who is now an old man of prominence in the town of Manchester in this state.

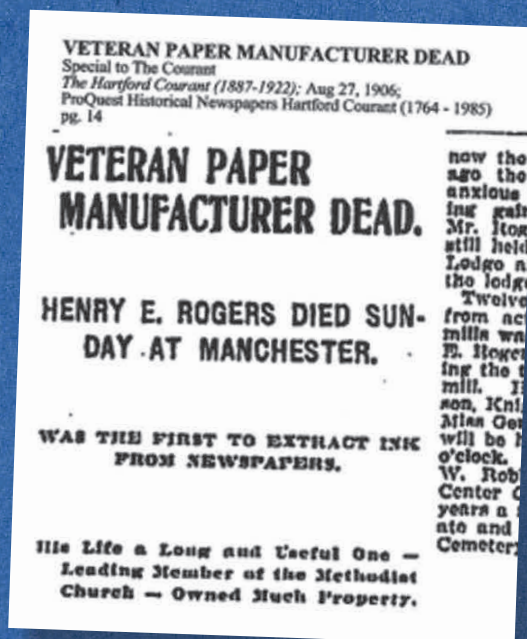
Henry E. Rogers, to whom belongs the credit of the discovery, is a born paper manufacturer. As a boy he worked in a paper mill owned by his father, one of his tasks being to sort out the colored paper that happened to be found with the regular stock. The idea occurred to him that if he could find a process for removing the colors, enabling all the stock to be used in the mill as it was received from the dealers, his fortune would be made without trouble. But it was not until years afterward that he discovered the first clue leading to the execution of his scheme.

Mr. Rogers was a Methodist, and loved singing as the most inviting of pastimes. One evening, while enjoying his favorite recreation, a hymn book fell into his hands on one of the covers of which were a number of discolorations that attracted his attention. The original blue of the cover had been removed in spots, leaving the paper perfectly white. He commenced tracing back the book to the publishers in Boston, believing that somewhere along the way he would discover the reason for the spots, which seemed to hold the key to the discovery which had been the dream of his life.

Two years had been spent in the search, when one morning Mr. Rogers found himself in a Boston publishing house with the hymn book in his hands. Only one or two apprentices were in the rooms. In answer to his inquiry one of them informed him that there was a pile of books in the building exactly like the one he had in his hands, and Mr. Rogers was permitted to select one of the defective books, for which he paid a quarter of a dollar.



Rogers began experimenting with colored paper and eventually hit upon a solution. Using potash, a simple bleaching compound, he could bleach the paper and end up with an acceptable white paper product. He also discovered that the printer's ink was as easily removed as the colors, a method so simple and inexpensive that he decided against reporting it to the U.S. Patent Office for fear they would not give him the protection he wanted. Instead, he trusted the secret to a handful of employees only as much as necessary to carry on his work. He retained exclusivity on the process for ten years until the secret leaked and other paper manufacturers adopted the process. The discovery led to paper panic, with "the whole of Connecticut ransacked" by freelance purchasers who offered money for old paper. It was not uncommon to find books and articles with historic value in the lots of paper sent to the mills. Rogers himself rescued an antique Bible that had been bought for half-a-cent-a-pound, and part of the original charter of the Connecticut colony was found in the streets of Hartford, having been dropped from a load of paper stock on its way through town.



Left: The September 24, 1891, edition of *The Hartford Post* details Henry Rogers' breakthrough discovery for recycling printed paper. Courtesy of Al Horn.

Above: Henry Rogers' obituary proclaimed "His Life a Long and Useful One - Leading Member of the Methodist Church - Owned Much Property." Courtesy of *The Hartford Courant*, August 27, 1906.

## 1860

Henry Rogers builds a fourth mill.

## 1861

In April, Confederate troops fire on Fort Sumter in South Carolina's Charleston Harbor, marking the beginning of the Civil War. The war lasts four years, finally ending in 1865.

## 1863

Rogers employees receive \$6.42 for a 60-hour work week.

## 1865

Fire destroys the original Atlantic Mill. Henry Rogers eventually rebuilds.

## 1868

Henry Rogers builds a mill at the east end of Charter Oak Park.

## 1890

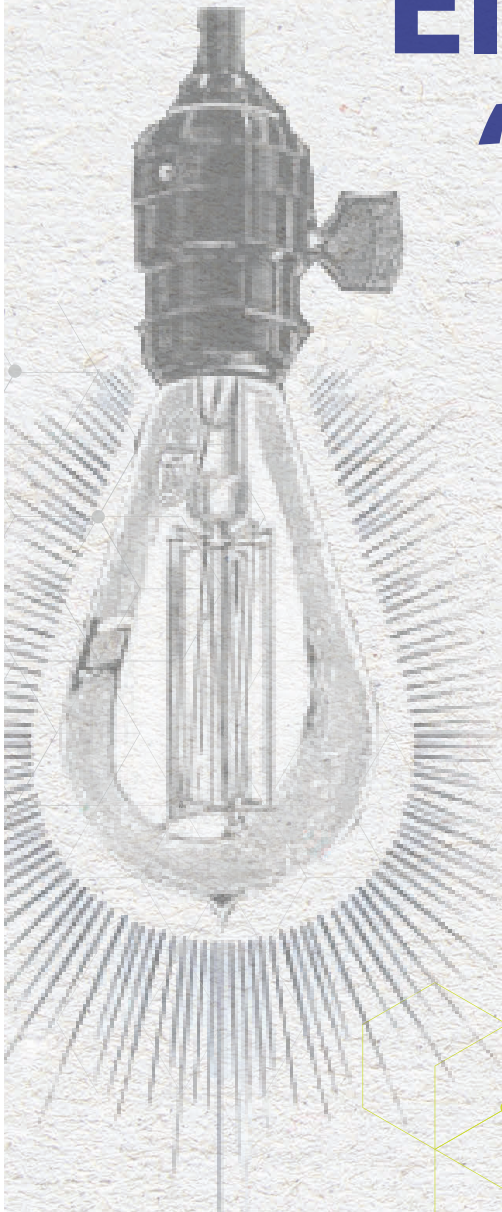
Henry Rogers retires due to poor health, leaving his children, Knight and Gertrude, in charge of the business. He dies in 1906.





## Chapter 2

# Ushering in the Age of Electricity with “A New Paper Company” (1900-1927)



By 1900, the cotton textile industry, once so dominant in Connecticut and New England, was in decline, unable to compete with lower-cost mills in Europe and the reconstructed South. The Rogers Paper Manufacturing Company, threatened by this shift in the American economy, was at a crossroads: Find new markets for its paper or close the mills.



**A NEW PAPER COMPANY.**  
 Articles of Incorporation Filed in Hartford.  
 Hartford, Nov. 12.—The Rogers Paper Manufacturing company of Manchester yesterday filed with the state secretary a certificate of incorporation. The capital stock is \$50,000. Of this amount \$10,000 is paid in in cash and the balance consists of real estate, two paper mills and equipment, and riparian rights. The incorporators are Henry E., Knight E., Evellne G., and Gertrude H. Rogers. Henry E. has 497 shares of the stock, and the other incorporators have one share each. Henry E. Rogers is the president and Knight E. Rogers is the secretary and treasurer.  
 The New England Skirt Manufacturing company of New Haven, capital \$50,000, has filed articles of incorporation; also the Wentworth Furniture company of Bridgeport, capital \$25,000.



Above: Offices of Hartford Electric Light Company, Hartford, CT, ca. 1902. Courtesy of Connecticut Historical Society.

Left: Rogers Paper Manufacturing Company incorporates. Henry E. Rogers is President. Knight E. Rogers, his son, is Secretary and Treasurer. Article courtesy of *New Haven Daily Register*.

Below: Example of insulation board used in power transformer industry. Courtesy of istockphoto.com.

Given Henry Rogers' entrepreneurial streak, it's likely the Rogers family set to work investigating new markets for their paper. However, a more colorful tale in company lore suggests that a successful inventor discovered by accident the insulating properties of paperboard and its ability to keep electrical transformers from exploding. One night, after the unknown inventor pulled the paper from the tails of his tuxedo, he wondered if the same paper could be used for transformer insulation. When it worked, he hunted down the manufacturer: Rogers.







With nothing to lose, the Rogers family took a calculated risk, and at the turn of the 20th century, began developing paperboard for the electrical industry. They also incorporated the company in 1901. But success didn't happen overnight. In fact, the new market proved to be just as precarious as its critics had predicted. In 1920, Rogers was not much larger than it had been during the days of Henry Rogers, with only twenty customers accounting for 95 percent of its business and annual average sales of \$600,000. But by 1927, the risks had paid off. Rogers became the primary supplier of paperboard to electrical transformer manufacturers, playing a major role in the electrification of America.





Equally important, Rogers grew adept at transforming traditional approaches and materials into new products to meet new market needs. Resiliency and reinvention became a distinct competitive advantages—and hallmarks of the Rogers way of doing business.

Above: An aerial view of Rogers Paper Mill, Manchester, CT, 1914. Courtesy of Manchester Historical Society.



# 1900

Rogers grows to become the third-largest manufacturing firm in Manchester. World famous Cheney Brothers is the largest, with 25 percent of town residents working in their silk mills.

# 1901

Rogers Paper Manufacturing Company incorporates in Connecticut. The company has \$50,000 in capital, \$1.66 million in today's dollars.



Left: Front of the Manchester Mill, located on the corner of Hartford Road and Prospect Street.



# SPECIAL ACTS AND RESOLUTIONS

OF THE

## State of Connecticut

WITH

### APPENDICES.

CONTAINING

A LIST OF JOINT STOCK CORPORATIONS ORGANIZED UNDER  
GENERAL LAW FROM MAY 1, 1901, TO APRIL 30, 1903,  
FROM MAY 1, 1903, TO APRIL 30, 1905, AND OF OTHER  
CORPORATIONS ORGANIZED UNDER GENERAL  
LAW FROM JULY 1, 1901, TO JUNE 30, 1905.

VOLUME XIV—1903 AND 1905.



Above: Hartford, CT., State Capitol Building.  
Courtesy of Historic New England.

# 1905

The State of Connecticut adopts the Public Accommodations Act, guaranteeing full and equal service for all people in places of public accommodation, resort or amusement.



## KNIGHT ELLSWORTH ROGERS

*Son of HENRY ELLSWORTH ROGERS and EVELINE G. (BIDWELL) ROGERS. Born at South Manchester, Connecticut, 1869. Prepared for college at Hartford High School.*

*Is now President and Treasurer of the Rogers Paper Manufacturing Company, Incorporated. Belongs to the Connecticut Valley Harvard Club, Hartford Club, and Transportation Club of New York City. Home and business address: South Manchester, Connecticut.*

# 1906

Henry Rogers dies. His son, Knight Ellsworth Rogers, is named President and Treasurer. Henry's daughter, Gertrude, becomes a principal in the business.

Above: Knight Rogers attended Harvard College from 1888-90 but did not graduate. Courtesy of the Harvard College Record of the Class of 1892 Secretary's Report N. IV. for the Fifteenth Anniversary.



# Making Rogers-Bord

circa 1920s

The basic process of making paper has changed little over the years, while the materials, technology and equipment have undergone many iterations and transformations. In the early 1900s, the multi-step process for creating both natural and synthetic Rogers-Bord—the brand name for Rogers' paper products in the early 20th century—has been compared to the same “care that a watchmaker employs in producing a fine timepiece.” At each step, the process is assessed to ensure the high quality synonymous with the Rogers name.

## Step 1

Untreated new cotton rags bought from textile mills are inspected, freed of all contaminants and dusted. Short fibers are cut to size and moved by conveyor belts to cleaning and washing machines.

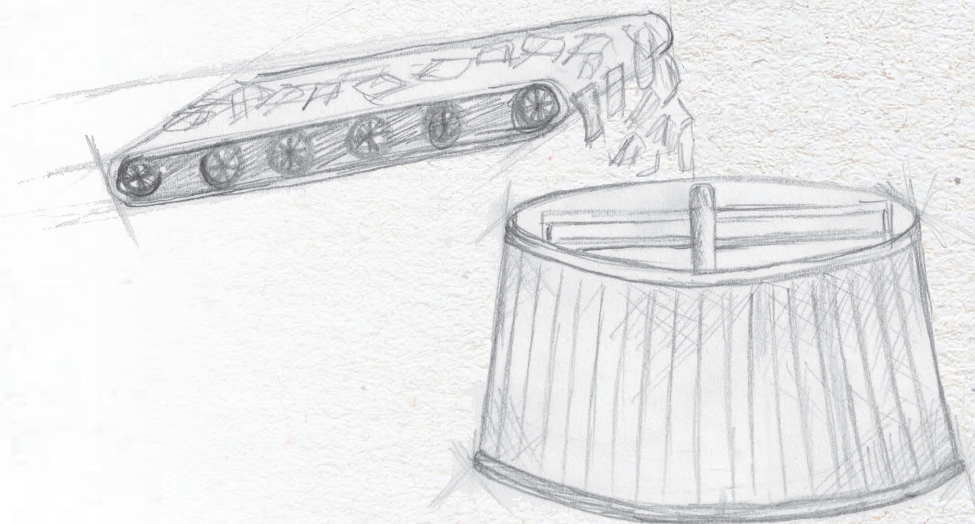


## Step 2

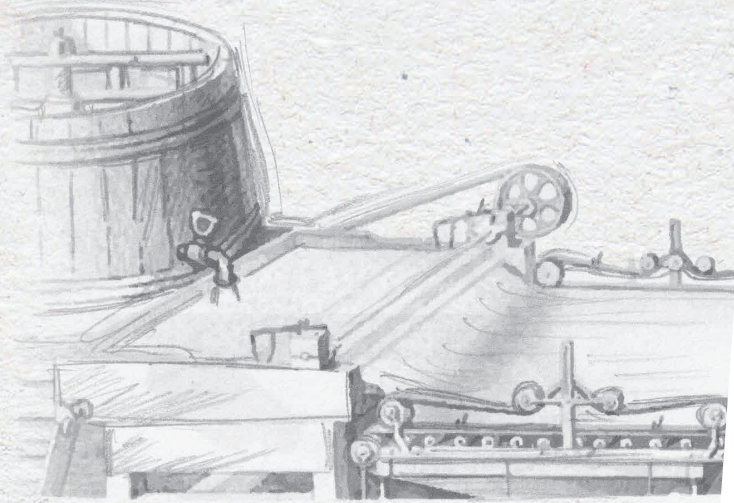
Pieces of rag are boiled in rotary boilers to eliminate oils or chemical treatments that had been applied to them by the original textile manufacturer or finisher.

## Step 3

Raw materials are placed in beaters, or huge mixing vats, that mix fibers and pulp with water. As fibers are beaten, a gelatinous carrier is formed. The beating continues only as long as the length of the fiber is maintained. Upon reaching the right consistency, the mixture is stored until needed.







### Step 4

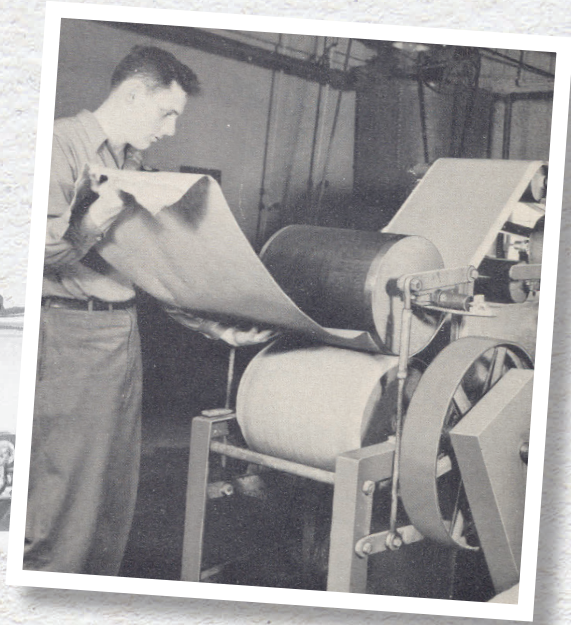
Beaters feed the paper machines where wet lamination picks up an endless stream of fibers and deposits them onto a wool blanket traveling over various rollers. The wool deposits the chain of fibers on a large mandrel. Layer after layer of fibers are wound on the mandrel to reach the desired density.

### Step 5

The paper boards are removed from the mandrel and sent through a heated tunnel more than 60 feet long to remove all water content.

### Step 6

The sheets are cut and trimmed to size; some are burnished up to three times.



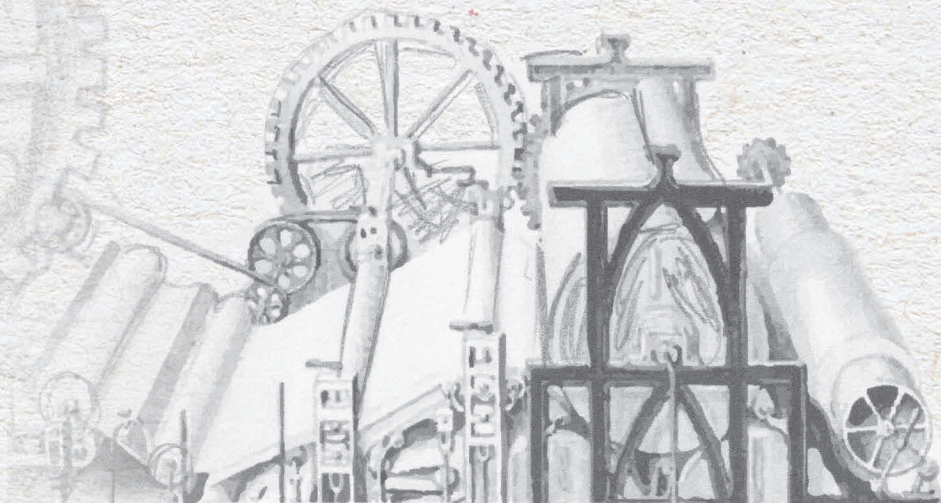
Above: Inside a Rogers mill in 1932 where the paper manufacturing process was very similar to the original 1920s' process.

### Step 7

Finished board is stored or sent to the fabricating division to be cut to customer specifications.

### Step 8

If the board is used for insulation, a dielectric test is conducted before shipment. Additionally, all boards are inspected continuously for density, thickness, distribution of fibers and weight. Samples of finished product are lab tested for quality.





# **Knight Ellsworth Rogers**

**(1890-1913)**

**Little is known about Knight Ellsworth Rogers. After graduating from Hartford High School, he attended Harvard College from 1888-90 and still lived with his parents and sister Gertrude at age 31, as recorded in the 1900 U.S. Census. Before his father's death, Knight served as Secretary and Treasurer of the company. He belonged to the Connecticut Valley Harvard Club, Hartford Club, Transportation Club of New York City and was a Republican. Like his father, Knight was an inventor. In 1906 he filed a patent for a "tobacco-sheet, board composed of tobacco-refuse, fibrous pulp and a flavoring extract."**





Above and Left: Knight Ellsworth Rogers. Courtesy of Harvard University Archives.

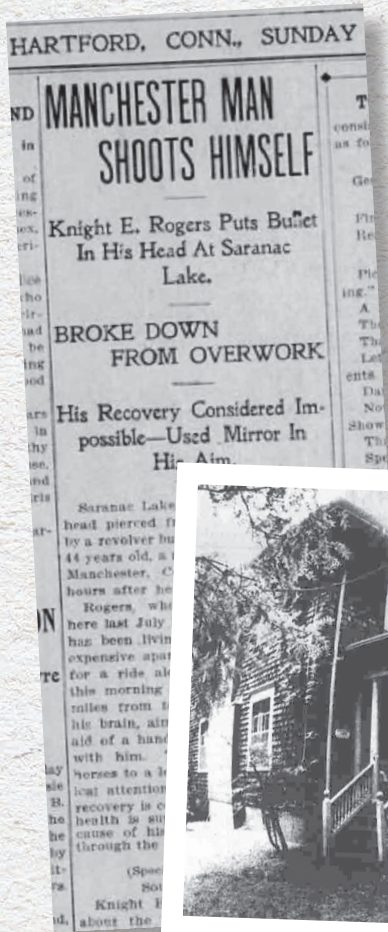
## Rogers Knight E

Knight Ellsworth Rogers and his sister, Gertrude, were close. The two built homes next to each other on Prospect Street, but when Knight became engaged and then married in 1908, Gertrude was “highly incensed,” according to an article in the *Manchester Herald* (1987). She told him to “Take your house and move,” so he did. Knight and his wife, Flora, moved their home across the street to a piece of farmland owned by the Cheney family.

Although some accounts describe Knight as a “ne’er-do-well,” it may have been that he suffered from chronically poor health. Likewise, the pressures of running the business without the guidance of his father in an especially profitable time no doubt proved challenging, as described in a 1913 *Hartford Courant* article:

“Of slight build, although above average height, [Knight’s] health had been greatly impaired [sp] since an attack of typhoid fever two years ago (1911) and he was of a nervous disposition... All these increases in business, coming as they did, about the time that he was stricken with typhoid fever, and making him anxious to get back to business, prompted him to return to work before he was able. He had trouble with his lungs and although he kept to business, he was compelled, last July, to seek a higher climate.”

Knight and Flora retreated to Saranac Lake, New York, in July 1913. Having been told that his condition would not improve, Knight had hoped the cooler lake air would bring him relief. On the morning of November 22, he rode into the countryside and shot himself,



Above Left: Article from *Hartford Courant*, November 24, 1913.



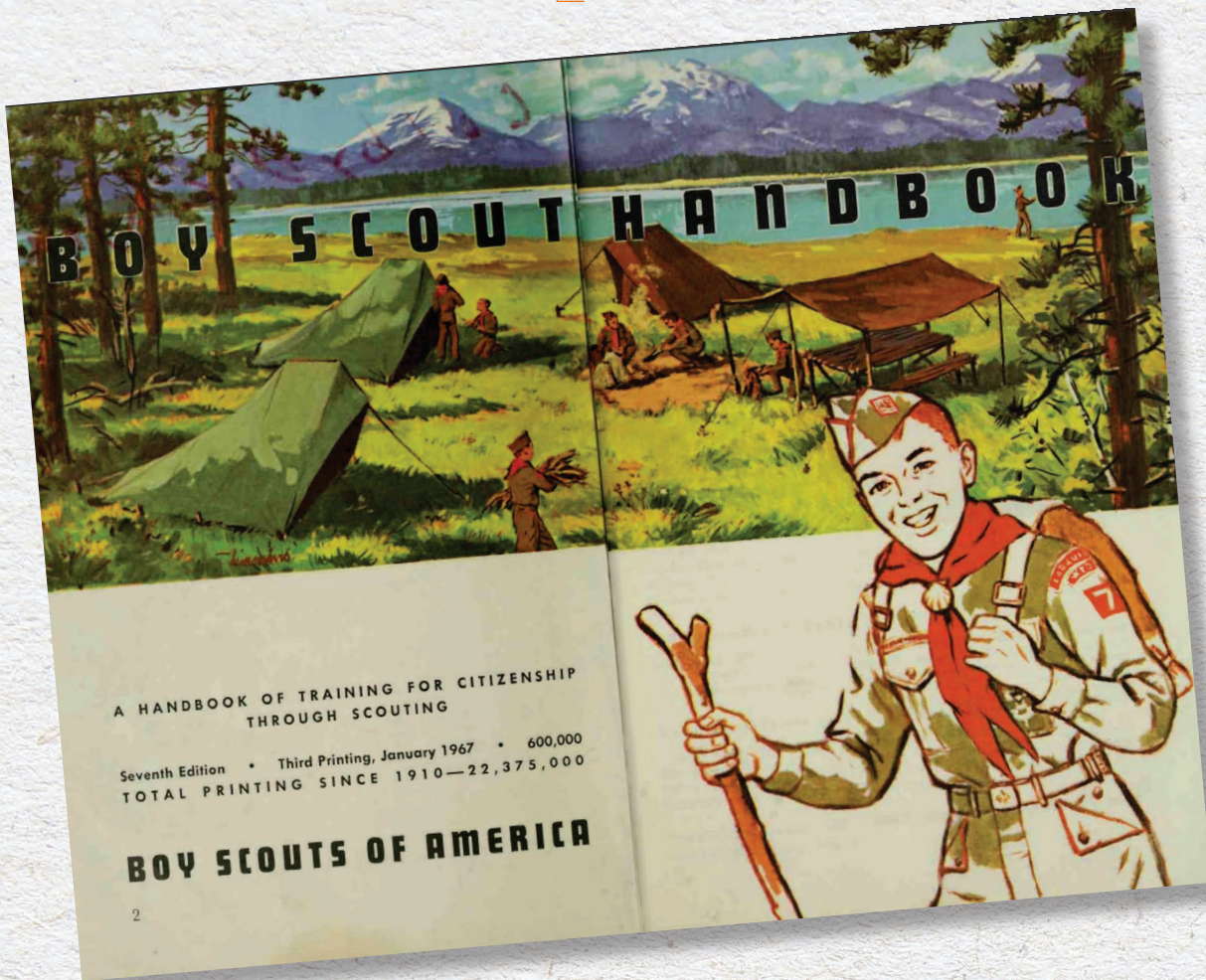
Above Right: The Rogers Mansion as documented in the *Manchester Evening Herald* on September 10, 1987.

“broke down from overwork,” as the paper reported. Gertrude contested his will for several years, and when she died, they were buried side-by-side with a shared headstone.



# 1907

The first Boy Scout Troop in Connecticut, Troop 1, is established in East Hartford. Sixty years later, PORON® Polyurethanes, a Rogers product, will be used in official Boy Scout shoes, then considered a standard of excellence in the shoe industry.



Above: Boy Scouts of America Handbook, 1967. Courtesy of private collection.

Right: Militia blockade against strikers, Lawrence, MA, 1912.

# 1912

The "Bread and Roses Strike," begins January 11 in Lawrence, Massachusetts, when women workers strike after their pay is reduced without consent. Word spreads and by the next day, 10,000 workers through New England walk out. News of the strike goes viral in newspapers across the country, and over the next weeks, thousands of workers join in, including mill workers in Connecticut. The turning point comes when police attack striking mothers, beating them with clubs, dragging them by their hair and arresting them as their children look on. The violence shocks lawmakers and stirs public sentiment, triggering seminal changes and protections for American labor.





# 1913

Knight Rogers dies. His sister, Gertrude Huntington Rogers, becomes President and Treasurer of the company.



Above: General Clarence Ransom Edwards visits Hartford, CT, during World War I. Courtesy of the Connecticut State Library.

## KNIGHT E. ROGERS'S WILL IS NOT CLEAR

Supreme Court Is To Be Called Upon To Interpret It.

Knight E. Rogers, who was a paper manufacturer in Manchester, died November 22, 1913, leaving a will, the language of which is not clear. The Riverside Trust Company of this city, is the administrator of the estate, with the will annexed, and the will is to be referred to the supreme court for construction, under a reservation agreed on in the superior court.

Mr. Rogers had been president and treasurer of the Rogers Paper Manufacturing Company and, on his death, his sister, Gertrude H. Rogers, who had been interested in the business, succeeded him as president and treasurer. Mr. Rogers died, leaving a wife. Under his will he bequeathed to her a life use of certain of his estate, and whether, under the language of the will, Rogers has a life interest in the manufacturing business is one of the questions the will is in doubt about. The manufacturing business was started by Peter Rogers, the grandfather of Knight E. Rogers. Mr. Rogers and his sister were owners in common of the real estate. Mr. Rogers built a house on the land owned jointly with his sister, but the house was built in such a way that it could not be moved. The half interest the estate has in the real property is appraised at \$28,000, including the Diamond Pond property in Glastonbury, and his interest in the manufacturing business was appraised at \$44,820. The estate has claims against the company amounting to \$6,250 and \$2,604 for dividends and \$490 for back salary.

Above: June 27, 1915, Hartford Courant.

# 1914

World War I begins. Connecticut is an essential industrial center, and many textile companies provide materials for uniforms and parachutes.



# 1916

Rogers expands by building a four-story concrete and steel dry house and a two-story building.



# Gertrude Huntington Rogers

(1913-1927)

Gertrude Huntington Rogers' formal professional career at Rogers commenced when her father died. While her brother, Knight, held the title of President, Gertrude possessed uncanny business sense and worked in the background as the company's informal leader, doing whatever was needed to steer the company in the right direction. It was Gertrude who navigated the company through the challenges of World War I, as she had already taken on much of the management before Knight's illness and subsequent death.

Right: Gertrude Rogers traveled throughout her life, as evidenced by this ship manifest from a 1926 trip from Trinidad to New York. Courtesy of the National Archives and Records Administration.

U. S. DEPARTMENT OF COMMERCE  
IMMIGRATION SERVICE

Record on this blank United States citizens and citizens of insular po  
foreign part or a part of the insular possessions of the United States, and  
of continental United States, or a part of another insular possession.

**LIST OF UNITED STATES CITIZENS**  
(FOR THE)

S. S. \*DOMINICA\* sailing from TRINIDAD, B. W. I.

No. OF PASS.	NAME IN FULL.		AGE.	Sex.	MARRIED OR SINGLE.	IS NATIVE OF UNITED STATES OR IF NATIVE OF UNITED STATES PLACE OF BIRTH (CITY AND STATE)
	FAMILY NAME.	GIVEN NAME.				
7	Rogers	Gertrude H.	60	✓ F	S	April 27th. 1866,



# Gertrude H. Rogers



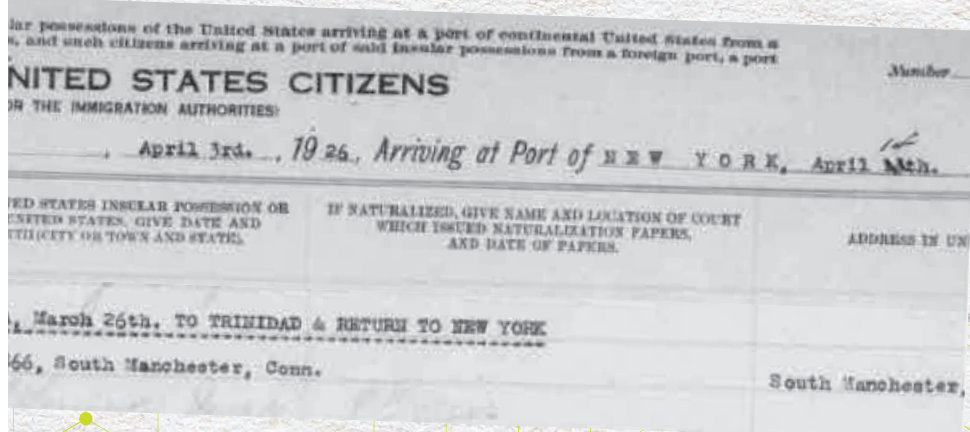
Gertrude Huntington Rogers oversaw Rogers' survival in the early days of the electrical products industry. Understanding that diversification in products and expertise in paper manufacturing were crucial to the longevity of the company, she also brought in the first non-family manager by hiring Charles Ray, a veteran paper manufacturer, in 1920. As the industry stabilized, so did Rogers. Described as "an able business woman," Gertrude was active in all operational aspects of the company, commenting in later years that she actually contributed to product innovation with her own "secret recipe."



Above: Photo of Gertrude Rogers. Courtesy of the Manchester Historical Society. Article from 1935 *Manchester Evening Herald*.

Upon selling her share of Rogers stock and handing over controlling ownership and management, Gertrude spent time traveling, dabbling in real estate and collecting art. She wrote plays under the pseudonym "Roger Hamilton, Jr," preferring to keep her identity as a playwright a secret, but word eventually leaked out to locals. Gertrude sailed to St. Croix in 1926 at the age of 60, and at one point in the 1930s, moved to Pasadena, California, before eventually returning to Manchester. After contracting a parasite in Mexico, Gertrude became a local philanthropist and started the Rogers Fund at the Manchester Memorial Hospital to support laboratory testing.

With no heirs or spouse, Gertrude's estate, valued then at \$138,550, was auctioned off upon her death in 1943. The auction became a day-long social event in Manchester, with people flocking to the auction out of curiosity but also in support since all proceeds benefitted the Manchester Memorial Hospital. "Hundreds of household goods sold," including an extensive collection of books, an assortment of over 30 Oriental rugs, mahogany furniture, a 15th-century English carved oak chest, silver and China sets. Gertrude's support of the Manchester Memorial Hospital established a culture of philanthropy and a commitment to community at Rogers that continues as part of her legacy.





# 1920

The average U.S. employee earns as little as \$3 for a 72-hour work week. As laws later changed, the work week shortened and wages increased. At Rogers, typical wages in 1920 had risen tenfold from Peter Rogers' era. Rogers remained one of the top employers in Manchester.

Right: Statistics from Manchester, CT, companies in 1920. Courtesy of the University of Connecticut Archives.

Below: Manchester, CT, Firemen in the 1923 Town Centennial Parade. Courtesy of private collection.

## Hours Worked and Weekly Wages

Year	Hours/Week	Weekly Rate
1863	60	\$6.42
1914	55	\$11.22
1920	48	\$29.18

## Manchester's Largest Companies in 1920

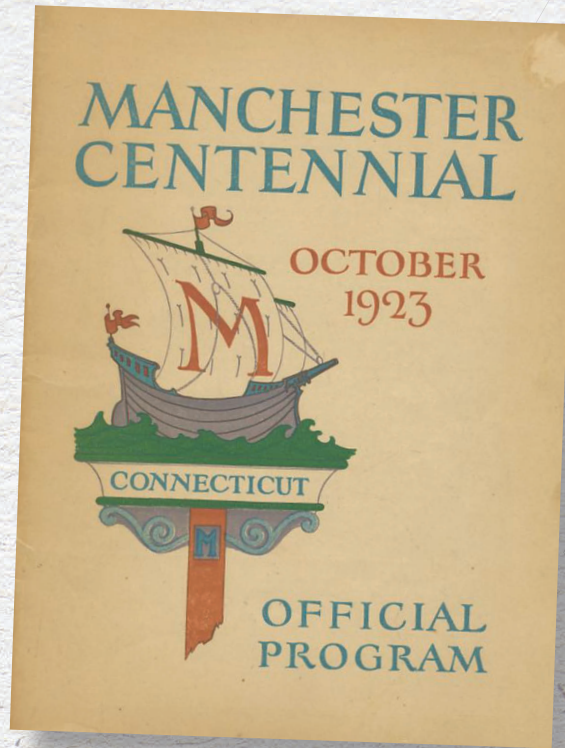
Company	Product	Value of Plant
Cheney Bros.	Silk	\$15,119,947
Case Bros.	Paper	\$ 233,082
Rogers Paper Manuf.	Paper	\$ 71,525
A. Willard Case Co.	Paper	\$ 61,850
Colonial Board Co.	Paper	\$ 44,900
Wm. Foulds Paper Co.	Paper	\$ 44,575
Tydall & Towels Paper Co.	Paper	\$ 43,600





# 1923

Manchester celebrates the 100th anniversary of its founding.



Left: Manchester Centennial Celebration official program, October, 1923. Courtesy of private collection.

# 1925

Rogers purchases a paper mill on Mill Street in North Manchester.

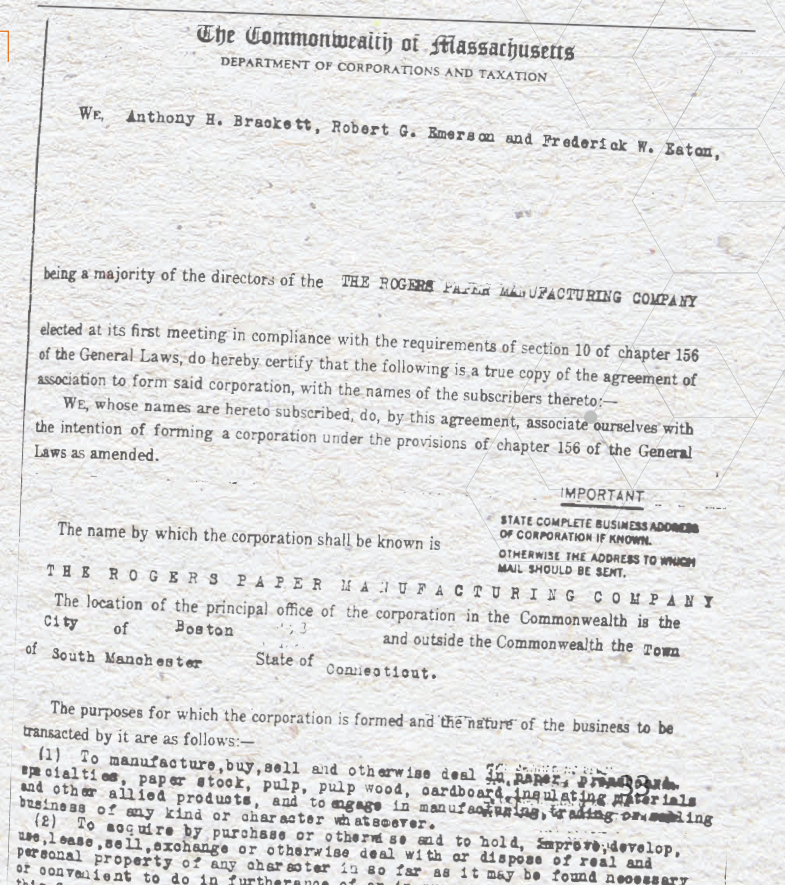
Below: Incorporation papers for Rogers Paper Manufacturing Company, 1927.

# 1927

Charles Ray purchases controlling interest in Rogers Corporation and becomes President and Treasurer.

Rogers Paper Manufacturing Company profits stagnate. Gertrude sells the last of the Rogers' family stock to a group of Boston financiers, Anthony H. Brackett, Robert G. Emerson and Frederick W. Eaton. The company reincorporates as a public company in the State of Massachusetts with annual sales approaching one million dollars. The principal product is transformer insulation board.

Brackett is named President and Treasurer. Technically the first non-family member to have the title of president, Brackett is only a placeholder as the financiers quickly turn around and sell a controlling interest of the company to Charles Ray, longtime General Manager of Rogers.





# Charles Ray

(1927-1938)

**Before purchasing controlling interest in Rogers Paper Manufacturing Company, Inc., in 1927, Charles Ray served as General Manager of the company for seven years. Charles had already built a successful career in the paper business, coming to Manchester in 1920 from Troy, New York, to work with the John A. Manning Paper Company. Upon moving to Rogers, he set about modernizing the mills and reorganizing the management structure, with an eye toward purchasing the company.**



# Charles Ray



Under Charles Ray's leadership, the mills increased efficiency and productivity, with production running 24 hours a day. In 1927, Charles purchased the company and then commissioned Bigelow, Kent, Willard & Co. to study diversification possibilities, a move that introduced Rogers' future President, Saul M. Silverstein, a project engineer from BKW assigned to the Rogers account, to the company.

Charles was well-liked. When word of his purchase reached mill employees, there was a "general expression of elation over Mr. Ray's purchase of the plants."

Born in Ireland, Charles was a prominent businessman and civically and socially active in Manchester. He served as President and District Trustee of the Manchester Kiwanis Club, President of the Men's Club of the Center Congregational Church, President of the Chamber of Commerce and an active member of the Salvation Army Band Campaign, Committee on Industrial Recovery and the Near East Relief for Orphans.

In 1938, when Rogers experienced financial difficulties, Charles resigned and accepted a similar position at American Tissue Mills in Holyoke, Massachusetts. He was replaced by Huntington P. Faxon of Boston, a member of the original group who financed the company in 1927.

## ROGERS PAPER COMPANY SOLD TO CHAS. RAY

General Manager of Concern Purchases Business and Two Mills Here—Founded By Rogers Family.

The Rogers Paper Manufacturing Company Inc., operating two mills here passed out of the Rogers family, which organized it in 1832, today when Charles Ray, for seven years general manager of the concern, announced that he had purchased the business and the mills. Boston banking interests will be affiliated with Mr. Ray in the new concern, but the local man holds a controlling interest in the corporation. Miss Gertrude H. Rogers of Prospect street has been president and treasurer of the Rogers company.

The two local plants of the company located on Charter Oak street and on Hartford Road employ a little over 100 hands. Paper specialties and press-board are manufactured in the mills. Business has been unusually good and the outlook for continued prosperity is promising. Mr. Ray said today that the concern has orders three months

Above and Left: Photo of Charles Ray and article from *Manchester Evening Herald*, August, 1927.

Right: *Manchester Evening Herald*, June, 1938. Courtesy of Connecticut State Library.

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## CHAS. RAY QUILTS ROGERS PAPER IN NEW SET-UP

Huntington P. Faxon, of Boston, Is New President; No Other Changes In Organization Of Local Firm.

Huntington P. Faxon, of Boston, Mass., has been elected president and treasurer of the Rogers Paper Manufacturing Company, following the resignation of Charles Ray from these offices, it was announced to-



## Chapter 3

# “Diversification: The Secret to Survival in a Modern Society”

(1928-1957)



Above: An early Rogers logo features a *fleur de lis*, a symbol of purity.

In 1932, Rogers Paper Manufacturing Company celebrated a milestone that few companies in the world achieve: One hundred years in business. Hard work, ingenuity and reinvention had sustained Rogers for a century. Even more remarkable was how the company's response to change had positioned Rogers not only for survival through the Great Depression, but also for future success in the decades to come. The transition from family ownership in 1927 had ended an era, but a new organizational structure in the form of a corporation, complete with new leadership and board oversight, reinvigorated the struggling company. Throughout the 1930s and 1940s, age-old techniques for making paper were improved by modern technology, state-of-the-art equipment and innovative processes that created completely new materials.



**SEALING UNLIMITED AT 500°F.**

**REINFORCED TEFLON\* (DUROID 5600) BACK-UP RINGS  
RETAINED OPERATING EFFICIENCY AFTER 50,000 CYCLES AT 500°F.**

Flat scarf-cut back-up rings of Duroid 5600, tested in the hydraulic system of a development jet aircraft, achieved a run of over 50,000 cycles at 500°F. in diester hydraulic fluid without appreciable change. In fact, the Duroid 5600 back-up rings did double duty and performed the sealing function after the O-rings had deteriorated.

Duroid 5600 is a solution to other high temperature "problem" applications. Both flat gaskets and machined parts resist cold flow, heat distortion, and extrusion in continuous service up to 500°F., in intermittent service up to 600°F., and for short periods up to 750°F. Duroid 5600 fabricates easily and is readily blanked into parts with smooth, clean-cut edges.

*\*Registered trademark of DuPont Company for its tetrafluoroethylene resin.*



**Greater Resistance  
to Heat Distortion**

TEFLON (left) distorted badly when subjected to 720°F. and then cooled. Reinforced TEFLON (DUROID 5600) exposed simultaneously to the same temperature retained flatness, demonstrating its greater dimensional stability at high temperatures.

Please write Dept. AA for Technical Bulletin

**ROGERS CORPORATION**  
ROGERS, CONNECTICUT

**PRODUCTS**

DUROIDS—for Gaskets, Filters, Electronic Devices, etc. ELECTRICAL INSULATION—for Motors, Transformers, Generators, etc.  
SHOE MATERIALS—for Counters, Midsoules, Liners, etc. PLASTICS—Special Purpose Molding Compounds and Laminates.

**SERVICES**

FABRICATING—including Combining, Coating, and Embossing. DEVELOPMENT—Research and Engineering of New Materials, Parts, and Products.

Circle No. 105 on Reader-Service Card opposite pages 15 & 93



Such a mindset of reinvention was coupled with aggressive growth and expansion plans. In the late 1940s and early 1950s, Rogers set a high bar, projecting sales and earnings to double every five years. The idea was simple: identify high-growth markets and market segments and direct sales and product development to penetrate them. These expansion efforts were coupled by a strategic approach to recruit well-rounded and talented employees.

Above: Rogers Corporation advertisement circa 1950 for Duroid 5600.



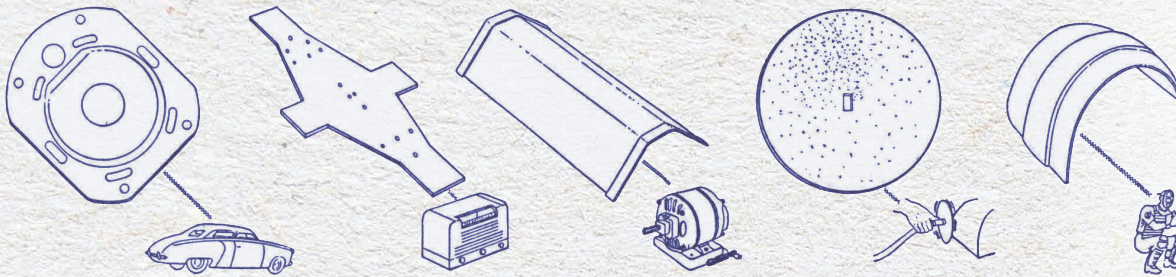
# The Scope of Rogers Corporation Activities

## SHOE MATERIALS

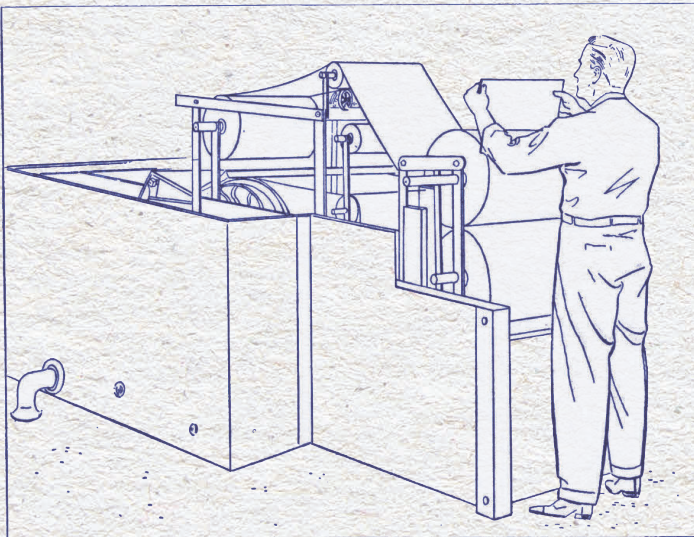


The Shoe Industry uses Rogers materials, specially blended for its use, in the manufacture of midsoles, counters and "Dutchmen". The range of application is from very inexpensive shoes to the most elegant evening slippers.

## FABRICATING DIVISION



Here Rogers sheets are cut, formed, drawn, bent and punched for such uses as automobile ignition insulation, radio antenna backs, slot cells for electric motors, sanding discs and protective athletic equipment.

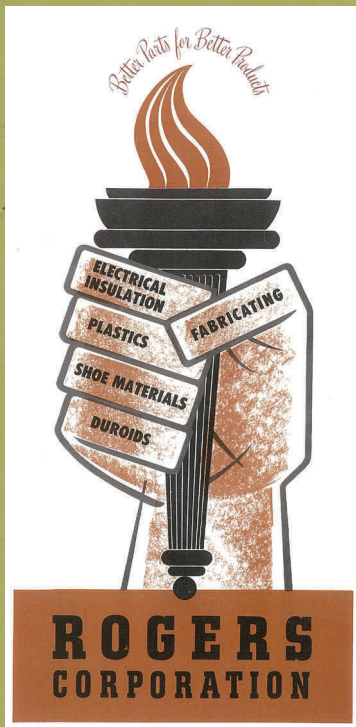


## RESEARCH AND DEVELOPMENT

Typified by this machine for the experimental production of new Rogers materials, research and development are leading to still further diversification of the industries served by Rogers Corporation.



Left and Right: From the Rogers 1947 Annual Report.



Additionally, the shift toward diversification continued, born out of necessity from the days of Knight and Gertrude Rogers but poised to play a prominent role under the leadership of Charles Ray and Saul M. Silverstein. A particularly bold move that proved fruitful was to push forward during the Great Depression with the creation of a comprehensive research and development program to identify new materials and markets. This led to a lucrative deal with the Bakelite Corporation for creating phenolic resin plastics. Rogers also began manufacturing Tympana printing board, rail joints and artificial leather.

By 1959, Rogers was no longer just an industrial company; it had evolved into a Research and Development organization with innovative thinkers who weren't satisfied with accepting "what is" but instead, contemplated "what could be" by engineering existing products into something new. For example, Rogers' insulating board was the best on the market, but what could it be if you threw latex or plastics into the mix? And how could such a change solve unmet customer needs? As an early company history inferred, diversification was the "secret to survival in a modern society."

Right: From the Rogers 1955 Annual Report.





# 1928

Rogers President Charles Ray commissions the Boston firm, Bigelow, Kent, Willard & Co., to study diversification possibilities for the company. Saul M. Silverstein, an MIT graduate and project engineer for BKW, is assigned to the Rogers account. Two years later, Silverstein joins the company as Technical Director, commencing a 41-year career with Rogers.

A smallpox outbreak hits Connecticut. The vaccine is rushed to the state, in one instance holding up the New York express train so that the medicine could be transported. Over 200,000 people rush to get the vaccine and by February, one-third of the state is vaccinated.



## 200,000 TREATED DURING EPIDEMIC

### State Health Board States That One-Third of State Is Protected.

Hartford, Conn., Feb. 6.—The State Department of Health estimates that more than two hundred thousand vaccine points were used during the recent smallpox epidemic. These were distributed in ninety-five different towns.

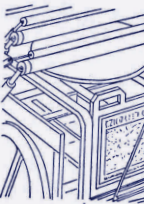
Among the towns using the vaccine most freely were New Haven, 73,000; Middletown, 21,550; Meriden, 19,580; East Hampton, 8,000; Portland, 3,000; Windham, 3,650; Waterbury, 4,255; Hamden, 6,400; Chester, 3,850; Norwich, 3,560; Simsbury, 8,920; West Haven, 1,690; East Haddam, 1,395; Colchester, 1,000.

The vaccine was rushed from headquarters here in every available way. In one instance the New York express was held here to receive the vaccine which was being hurried to the waiting train. Inter-city bus lines made extra trips and stops to handle vaccine.

Approximately more than one-third of the entire state is now protected against smallpox, according to the health department which is checking to determine exactly how many persons have been vaccinated inside of five years.

# 1929

Sidney A. "S.A." Brown, an MIT graduate and classmate of Saul M. Silverstein, is hired to oversee the first Rogers laboratory to study new products and markets, beginning the tradition of research and development at Rogers. He experiments by combining clay, rubber, wood and resin with cellular fibers, work that eventually results in the development of resin board and newspaper matrix. Brown was a chemical engineer who eventually became Vice President in charge of production.



Manufactured for these materials for printing plates

Left: The February 6, 1928, edition of the *Manchester Evening News* reports on the smallpox epidemic. Courtesy of *Manchester Evening News*.



Right: S.A. Brown, an early Rogers innovator, from a 1955 Annual Report.



A Manchester plant is purchased from A. Willard Case Company. Paperboard is made in such large quantities that the plant's output quickly returns more than enough to pay off the purchase price. Hundreds of mill and field tests take place at the plant, all aimed at new product development. This includes Tympana printing board, carpet stencils, plater board for textile uses, paperboard for gaskets, artificial leather, oil cloth, concrete forms for construction, rubber and asphalt boards, spool ends, flinting strips and rail joints made of hard fiber compositions. The company even considers making paper for cigarettes.

In October, the American stock market crashes, bottoming out in 1932, by which time it had fallen 89 percent from its September 1929 peak. The crash paves the way for the Great Depression that would follow in the 1930s and last until World War II. With the country in an economic tailspin and amid stiff competition, Rogers intensifies its search for new markets and products.

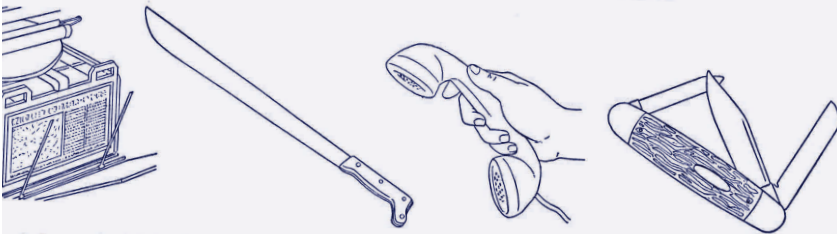
Raymond A. "R.A." St. Laurent, an MIT classmate of Saul M. Silverstein and S.A. Brown, joins Rogers as Sales Manager. He conducts extensive surveys to determine appropriate markets and travels the country seeking potential suppliers for Rogers products. St. Laurent eventually becomes Vice President in charge of sales.



Above: R.A. St. Laurent is instrumental in identifying new markets for Rogers products. From a 1955 Rogers Annual Report.

Left: Rogers' venture into phenolic resin plastics is key to the company's survival during the Great Depression. The material is hailed as "The Material of a Thousand Uses," by the Bakelite Corporation. From the 1947 Annual Report.

## PHENOLIC RESIN PLASTICS



red for, and sold by, Bakelite Corporation, parts for telephones, to the replacement of bone handles  
 ials have a wide range of use, from matrices on knives.  
 g plates, through handles for machetes and

# 1932

Celebrating one hundred years of business, Rogers is the world's largest supplier of fiber board electrical insulation for transformers.

Rogers begins a relationship with Dr. Leo Baekeland, a plastics pioneer, and adds a new product line: FIBERLOY phenolic resin plastics. These fiber-reinforced, sheet plastic molding materials are marketed exclusively through the Bakelite Corporation, which uses the materials to produce molded plastic products such as knife handles, printing plate matrices and telephone parts. The product line heralds the company's first diversification into non-paper products.

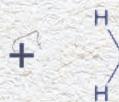
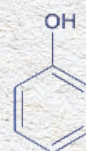
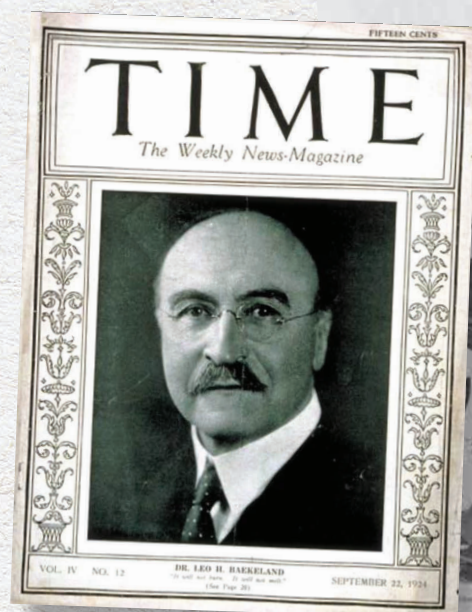


# "The Material of a Thousand Uses"

"Born of fire and mystery," with the "rigor and brilliance of glass and the lustre of amber from the Isles ... Poetically, it is a resin formed from equal parts of phenol and formaldehyde, in the presence of a base, by the application of heat. It will not burn. It will not melt..."

—Time magazine, September 1924

Dr. Leo Hendrik Baekeland, one of Belgium's most respected chemists, was a serial inventor who immigrated to the U.S. in 1898 to work on photographic paper. In 1899, he made a fortune when he sold the rights to his photographic paper to Kodak. He then turned his attention to creating a synthetic shellac. When he mixed phenol with formaldehyde, the resulting brown sludge settled at the bottom of his test tube, refusing to pour. He tried chemical solvents to dissolve the sludge, with no luck. He applied heat, thinking that it would melt, but instead, it hardened. Further testing showed that the substance was extremely durable and light and perhaps most important, moldable once it was ground into a powder. In 1909, Dr. Baekeland patented his new creation, Bakelite, and for the next 18 years, was the sole distributor of the phenolic plastic.



phenol

formaldehyde





# BAKELITE

MATERIAL OF A THOUSAND USES

## Chemistry's Gift to Industry

IN a little over a decade this new material—a chemical substance made from carbolic acid and formaldehyde—has established for itself an enviable position in the industrial world.

Known chemically as phenol resin, and sold under the trade-mark "Bakelite," it is made in many different forms, such as molding material, varnish, cement, lacquer, enamel; in sheets, rods and tubes and in transparent form.

In innumerable places, it has superseded wood, rubber, porcelain, fibre and other substances, and raised higher standards of quality in the industries in which it is employed.

Thus, Bakelite is being successfully used for varying applications such as radio panels and dials, coffee-pot handles, electric light sockets, pipe stems, pencil barrels, razor boxes, electric irons, grinding wheels, armature coils, jewelry, telephone receivers, and many others.

Bakelite is a heat-resisting, high dielectric material, impervious to oils, moisture and all common solvents. It has unusual mechanical strength and does not deteriorate with age.

The possibilities of Bakelite are almost unlimited. Perhaps there is a use for it in your product. Our Research Laboratories will be glad to co-operate with you.

Send for illustrated booklet.

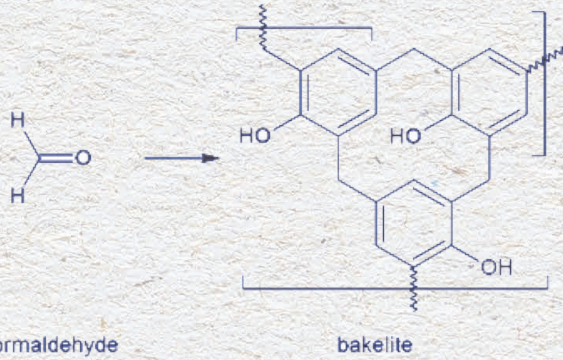


**BAKELITE CORPORATION**  
217 Park Avenue, New York, N. Y.  
Chicago Office: 636 West 22nd Street



Phenolic compounds were ideal for making buttons, handles, jewelry, toys, electrical insulators and more, but as industry demand grew, Baekeland needed a partner with expertise in producing uniform materials that would resist weakening under stress. He turned to Rogers.

Rogers had already started investigating the plastics market in 1931 after a report found an immediate market need for 25-35,000 pounds of plastic each week. That same year, Rogers had developed a special beater addition process that included the wet lamination of thin plies of cellulose and other fibers with various kinds and quantities of resin. The sheets were dried at low temperatures and then exposed to heat and pressure in the creation of stamped pre-forms such as discs, rings or other punched shapes. These were used in the compression molding process either instead of or in addition to molding powder.



In 1932, the two entities formed the Bakelite Rogers Company and introduced the first fiber-reinforced thermoset plastic molding compounds to the American industry, the first of many fiber-plastics breakthroughs that would become Rogers' strength and trademark in material manufacturing. These first thermosetting phenolic resin boards were used to manufacture printing plate matrices, telephone parts, instruments panels, motor housings, circuit breaker handles and a host of other applications. In 1949, after marketing its plastics exclusively through the Bakelite Corporation for 17 years, Rogers began its own line of phenolic resins and by 1952 was manufacturing and marketing a full line of impact phenolics.

Above Left: *Time* magazine cover featuring Dr. Leo Hendrick Baekeland.

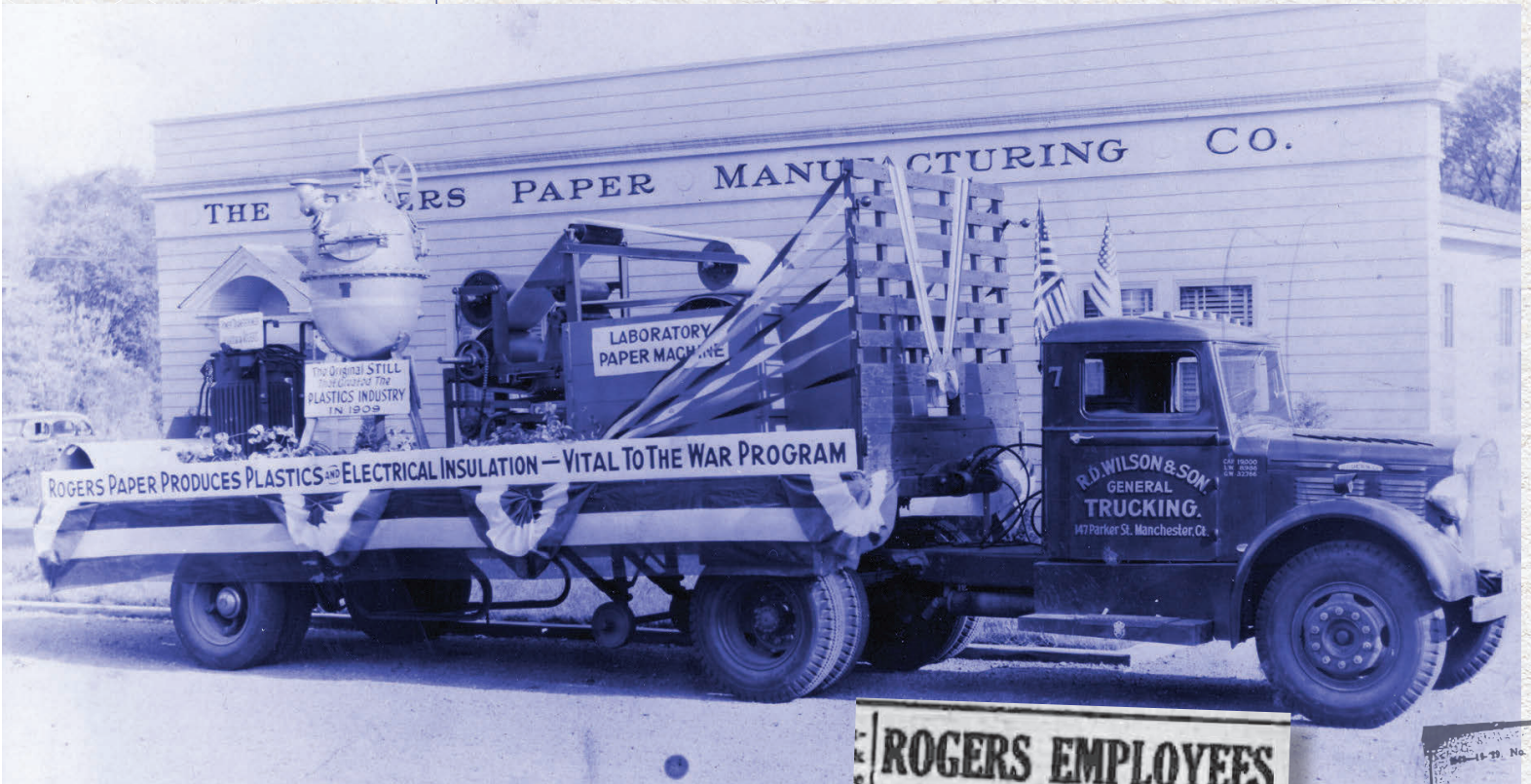
Above: Bakelite advertisement.



# 1933

Rogers workers affiliate with the International Brotherhood of Papermakers, American Federation of Labor (AFL).

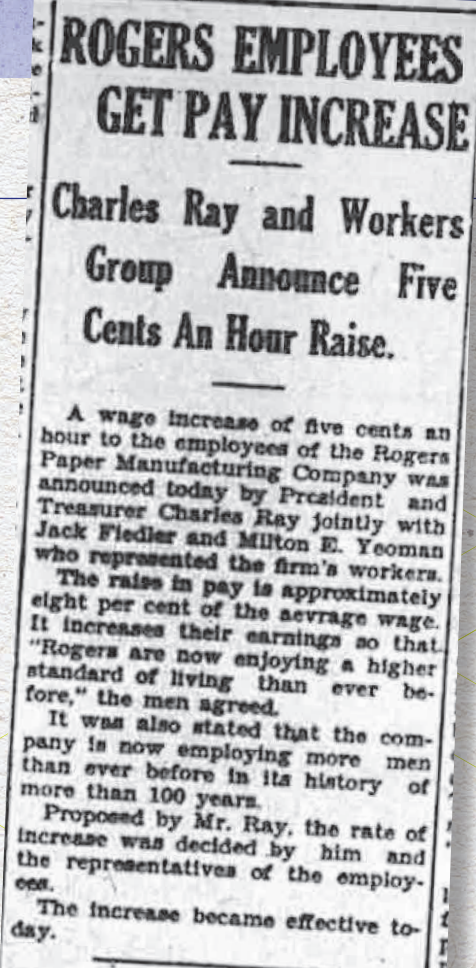
Below: A float constructed for a Manchester Chamber of Commerce parade.



# 1936

Rogers purchases the Goodyear Rubber Plant in Williamsville, Connecticut, for \$250,000, to house its electrical insulation production lines. The company now has three operations in Manchester and one in Goodyear. This building would become Rogers' global headquarters through 2016.

Right: Rogers employees receive a "five cents an hour raise," according to a January 5, 1937, *Manchester Evening Herald* article.





# 1938 *Huntington P. Faxon*

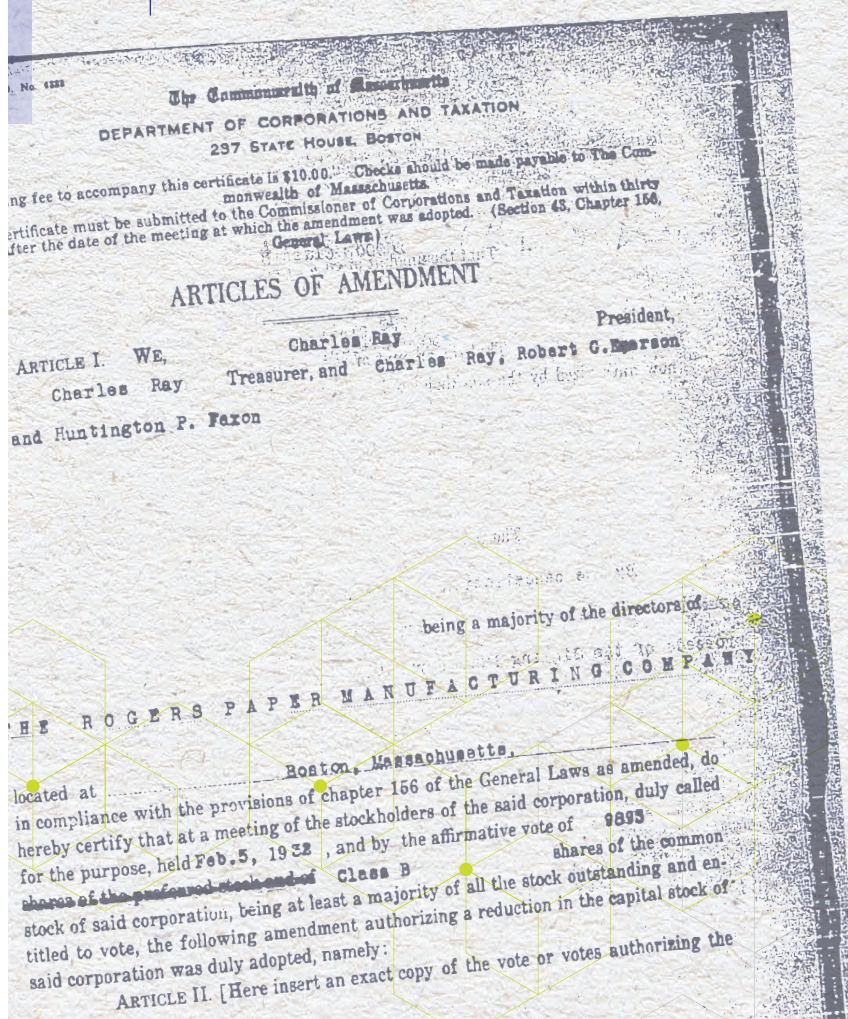
**Huntington P. Faxon** (1938-1944) becomes Rogers' President and Treasurer after Charles Ray leaves the company. A World War I veteran and Harvard graduate with extensive experience in manufacturing and finance, Faxon had been Vice President and a director of the company for 11 years. According to a 1957 article in the *Rogers Reporter*, Faxon was a member of the original group who refinanced the company in 1927.

Faxon was instrumental in overseeing the company's move from Manchester to the Goodyear plant as well as the gradual consolidation of the company. He also guided Rogers through the challenges of World War II. As President of Rogers, he lived in Cambridge, Massachusetts, but spent three-to-four days a week in Manchester. He was also a director of the Wolverine Power Company of Michigan and Carman and Company of New York.



Above: Huntington Pope Faxon, 1937. Courtesy of Harvard University Archives.

Below: Faxon died unexpectedly in 1944 while President of Rogers.



## Manchester Firm Head Dies in Cambridge

Manchester, Jan. 22.—(Special.)—Huntington Pope Faxon, 52, president of the Rogers Paper Manufacturing Company of Manchester and well known here since he made weekly trips to the town in connection with the company's business, died suddenly Friday in Cambridge, Mass., where he made his home.

He became vice-president of the local company in 1928 after it was sold by the Rogers family and was made president of the concern five and a half years ago. He was also a director of the Wolverine Power Company in Michigan and of Carman and Company in New York.

Native of Brookline, Mass., he was educated in schools there and at Harvard University, graduating from the university in 1912.

He leaves his wife, four daughters and three grandchildren. Funeral services will be held in Cambridge Monday noon.

Left: 1938 corporation papers



**WANTED**  
 Male or Female  
 Help for Important  
 War Work  
 We Will Also Use Em-  
 ployed Persons On a  
 Split-Shift Basis.  
 Inquire  
 Rogers Paper  
 Manufacturing Co.  
 Mill and Oakland Streets

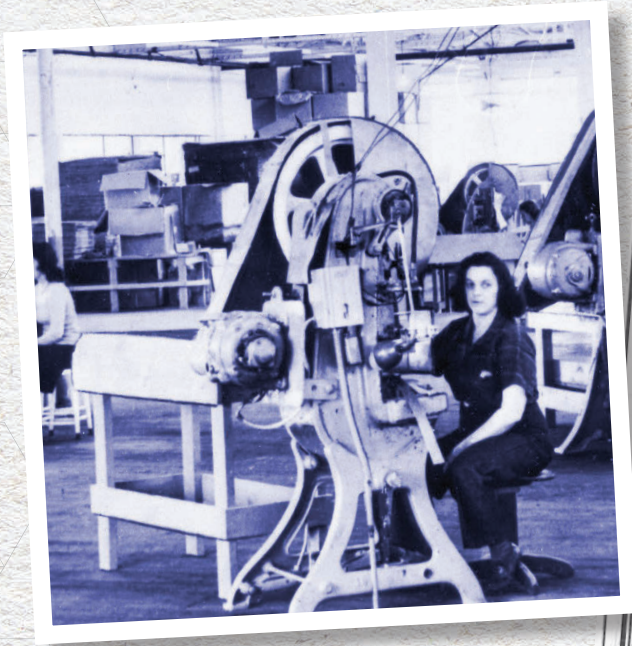


Above Left: A Rogers advertisement recruiting employees in the October 18, 1943, *Manchester Evening Herald*.

Above: The 1939 Manchester crew poses for a photo.

# 1941

America enters World War II.



Above: Women operate machinery during World War II circa 1942. Photo courtesy of Bruce Lindsay.

**NATIONAL WAR FUND**

**TONIGHT The Air Raid Warden Launches Manchester's Campaign to Raise \$36,300 As Our Quota for the NATIONAL WAR FUND Of \$125,000,000**

**55% Of This Fund Will Be Used For The U. S. —The Home Away From Home For Our Fighting Force**

*The Plan—*  
 Over 600 wardens covering the entire town will call at homes in their respective territories tonight or Tuesday night with complete information and pledges. To help your warden you can make your donation when he or she calls. If you wish to give consideration to the matter they will call again before Friday, Oct. 15. The courtesy and consideration given to the people during the Bond Drive was exceedingly fine. Won't you do the same for this worthy cause? **GIVE GENEROUSLY THAT MANCHESTER MAY BE CERTAIN OF ITS QUOTA!**

*The Budget—*

<b>U. S. O. —</b>	
UNITED SEAMEN'S SERVICE .....	French Relief Fund .....
WAR PRISONERS' AID .....	Holston War Aid .....
RUSSIAN WAR RELIEF .....	United Church .....
UNITED CHINA RELIEF .....	Queen Wilhelmina .....
BRITISH WAR RELIEF SOCIETY .....	Norwegian Relief .....
REFUGEE RELIEF \$5,621,000, CONTINGENT FUND \$ .....	Friends of Japan .....

Fuel and Medical Supplies, So Far As Distribution Permits, for

Greek War Relief Association .....	\$3,122,000
Polish War Relief .....	3,750,000
United Yugoslav Relief Fund .....	2,250,000

**Let's Make The Quota Between Oct. 11th and**





## Rogers Corporation and World War II

Rogers products were instrumental to the war efforts of World War II. The American soldier, whether slashing through a Pacific jungle with a machete, drinking from a canteen in North Africa, calling in on a field telephone in Italy or having lunch in a USO cafeteria used products made from Rogers materials. The company supplied the armed forces with electrical insulation and Bakelite products in unprecedented amounts under stringent deadlines, often surpassing the government's expectations. During the war, metal needed for tanks, airplanes, artillery, ammunition and other war items was in short supply and consequently collected and recycled stateside. For example, the old East Mill, left by Rogers in 1940, was demolished to salvage its iron for the war effort.

en Service  
Campaign To  
a In The  
FUND

S. O.  
Forces

get—

\$61,227,000

.....	\$1,125,000
.....	\$2,320,000
.....	\$10,155,000
.....	\$9,873,000
.....	\$5,698,000
T FUND	\$12,307,367

COUNTRIES:

.....	2,183,000
.....	125,000
.....	211,000
.....	205,000
.....	200,000
.....	121,000

and 15th

Left: Rogers employees participated in a variety of war efforts including fundraising for the National War Fund, as described in the October 11, 1943, *Manchester Evening Herald*.

Above: During World War II, Margaret Benoit and Doris Mozzer conduct tests in the Rogers, CT, laboratory. Photo courtesy of Joe Mozzer.





Left: A 1941 photograph of the Manchester, CT, headquarters.

Below: A 1943 contract signing by Rogers union representatives.

Metal substitutes were also needed, and phenolics produced by Rogers found their way into artillery range finders, aircraft control boxes, bombsites, telephones, canteen caps and cafeteria trays. Initially used as a metal substitute, plastics ultimately proved to be durable, useful materials in their own right. The government realized that many goods did not have to be made out of metal; they could be fashioned from cheaper, less scarce materials, namely plastics.

Throughout the war, the Rogers Goodyear Plant produced high-grade insulation for radios, radar, Signal Corps telephones, electrical transformers and packing list protector plates, universally required as a protector on overseas shipments.

As with other companies, many Rogers employees joined the armed forces and fought overseas. Those at home participated in victory gardens, war bond drives, rationing, metal drives and recruiting fairs. One such fair occurred in 1943, held jointly by management and labor from Oak Lodge 43, International Brotherhood of Papermakers, to recruit labor and promote efficiency.

Rogers also had women take over jobs formerly performed by men, both in the plants and in the office.





# 1943

By accident, Rogers enters the shoe business when a fire destroys a manufacturing company that produces materials for shoe midsoles and counters in Eagleville, Connecticut. Realizing similarity in the manufacturing process (shoe materials were essentially paper board with small amounts of rubber), Rogers talks with the Eagleville company and then shoe industry customers, promising to fill the void promptly. Shoe companies were incredulous at first, but Rogers comes through, fulfilling carload shipments of material within three weeks.

# 1944

**William H. Raye** (1944-1946) becomes President. As an infant, Raye was placed in a bureau drawer and stowed on the floor of a rowboat that his family used to immigrate to America by crossing Passamaquoddy Bay from Deer Island, Canada, to Eastport, Maine. Upon graduating from Boynton High School in Eastport in 1899, he worked as a bank teller, enlisted in the Maine National Guard, managed Oxford Paper Company in Oxford Maine, and became a railroad commissioner for the state before gaining expertise in the oyster industry. From 1911 to 1936, he bought and sold several oyster farms and served on various state and regional oyster and fishery commissions. A 1933 article in the *Oakland Tribune* described him as "the nation's biggest oyster man."

Raye also became known for his acumen in turning troubled companies around. He was president of Laconia Car Company, Lowney Chocolate Company, Allied Candy Companies and General Seafoods. He retired in 1935 at the age of 53, devoting his time to civic organizations. He served on the Maine State Park Commission, the Board of Trustees for Saint Andrew's Hospital in Boothbay Harbor Maine, and was active with several environmental groups. In 1944, he came out of retirement to lead Rogers until a new president could be hired following Faxon's untimely death.



Above: William H. Raye, from his 1924 passport.

A handwritten signature in cursive script that reads "William H. Raye". The signature is written in dark ink on a light background.



# 1945

Rogers opens the fabricating division to form products into various shapes and sizes for electrical and other manufacturers. The division features full blanking, drawing and forming dies, steel-rule dies, cutters, slitters and cuffers and presses to produce all types of flat and three-dimensional pieces. Processing also includes wax and other impregnations, painting and assembly.

**VOTED:** That the name of this corporation is hereby changed from The Rogers Paper Manufacturing Company to Rogers Corporation."

Above: From 1945 Rogers Corporation papers.

The company is renamed Rogers Corporation to reflect the growing diversity of products produced, services offered and markets served. The company focuses on expansion through aggressive research and development activity.

Below: From Rogers Corporation 1945 Annual Report with tagline reading, "Creators and Fabricators of Unique Fibrous and Plastic Materials."

Anticipating a post-war need and future difficulty in obtaining 100 percent cotton rags, Rogers develops DUROK, the first insulating material made from 100 percent purified non-cotton cellulose.

**ROGERS CORPORATION**  
MANCHESTER, CONNECTICUT

1945

Annual Report To The Stockholders

HARTFORD DAILY COURANT: THURSDAY, JULY 26, 1945.

## New Insulating Material Is Made By Rogers Corp.

Addition of a radically new electrical insulating material has been made by Rogers Corporation of Manchester, whose officials have pronounced it superior to any previous insulating material produced by the company.

Called "Durok" and manufactured in its plant at Goodyear, the new Rogers product anticipates a post-war need in the electrical field and has already been given nationwide distribution.

Normally enjoying a substantial portion of the slot cell insulation business in the electrical motor field, Rogers believes that its new material will be in greater demand

than ever by manufacturers of hermetically sealed refrigerator motors, because of its excellent chemical characteristics.

The chief difference between "Durok" and other top-grade insulating materials for the electric motor field is that the new Rogers product is 100 per cent non-cotton, while the best comparable products are made of 100 per cent cotton rag fibers. Actually, it was the Rogers Corporation which pioneered the new cotton rag material and proved its previous superiority.

"Postwar," said a company official, "further textile improvements will make it even more difficult to find usable new cotton rags. We feel, therefore, that we have what might be called a postwar product, though it is available to the electrical industry now."

Continued research at both Goodyear and Manchester plants is expected to result in further additions to Rogers' expanding line.



CREATORS AND FABRICATORS OF UNIQUE FIBROUS AND PLASTIC MATERIALS



**Rogers Making A New Product**

**Local Corporation Develops Superior Type Of Electric Insulation.**

Addition of a radically new electrical insulating material has been made by Rogers Corporation, whose officials have pronounced it superior to any previous insulating material produced by the company.

Called "DUROK" and manufactured in its Goodyear mill, the new Rogers product anticipates a postwar need in the electrical field and has already been given nationwide distribution.

**See Big Demand**

Normally enjoying a substantial portion of the slot cell insulation business in the electrical motor field, Rogers believes that its new material will be in greater demand than ever by manufacturers of hermetically sealed refrigerator motors, because of its excellent chemical characteristics.

The chief difference between "DUROK" and other top-grade insulating materials for the electric motor field is that the new Rogers product is 100 per cent non-cotton, while the best comparable products are made of 100 per cent cotton rag fibers. Actually, it was the Rogers Corporation which pioneered the new cotton rag material and proved its previous superiority.

**New Material**

With the improvement of textiles, cuttings of which are used in manufacturing electrical insulation, it has been increasingly difficult to obtain cotton cuttings which have not been chemically treated and thus made useless for insulation. Rogers, after several years of searching, found satisfactory non-cotton cellulose raw materials, then developed them to the production stage which has been reached.

"Postwar," said a company official, "further textile improvements will make it even more difficult to find usable new cotton rags. We feel, therefore, that we have what might be called a postwar product, though it is available to the electrical industry now."

Continued research at both

Goodyear and Manchester plants is expected to result in further addition to Rogers' expanding line of fibrous and plastic sheet materials.

Left and Above: Articles from the 1945 *Hartford Daily Courant* about Rogers' new product.

# 1947

When the local school burns, Rogers lends part of its factory without cost for two years to house the Goodyear students left without a school.

# 1946

Saul M. Silverstein becomes President and General Manager.



# Saul M. Silverstein

(1946-1966)

It was chance that brought Saul M. Silverstein to Rogers in 1928 as a consultant to study diversification possibilities, but it was intentional on the part of Rogers President Charles Ray to bring Silverstein in-house as technical director just two years later. A native of Boston and an MIT graduate, Silverstein was personable and a rare breed who combined chemical engineering expertise with “a knack for attracting hardworking creative minds,” remembers Harry Birkenruth, a former Rogers President who was hired by Silverstein in 1959. A keen salesman, Silverstein understood that he wasn’t selling products, he was selling the expertise of his highly skilled team.

Silverstein built his career at Rogers, becoming Vice President and General Manager in 1938, President in 1946 and Chairman of the Board of Directors in 1966.

Manchester Evening Herald

## Saul Silverstein Leaves On 27th Foreign Trip So

Saul M. Silverstein of 28 Stephen St., board chairman of Rogers Corp., will leave Wednesday on his 27th foreign trip since 1952, five of them around the world.

This trip will be to the Far East and to Australia and New Zealand. He will return on Dec. 17.

In the Far East, he will visit Japan, Korea, Hong Kong, Macao, The Philippines, Thailand, Malaysia, Singapore, and Indonesia.

His trip will be one-third on company business, one-third lectures, and one-third sightseeing. He will be accompanied by Mrs. Silverstein. They will travel by plane and will leave from Seattle, Wash.

In Tokyo, he will be the U.S. representative to the International Management Congress, which meets every three years. Its last meeting was in 1966 in Rome. The next will be in



Saul M. Silverstein

lations Award from the for the Advancement ment in 1961, and

Turkish Jewish Th Junior the Ve and the te of Har resident o for its now its t. He wa Town Bulk Manchester June several e the construc member of man Relat

## Rogers Host To Belgians

### Seven Industrials Will Tour Factory in Good- year on Next Tuesday

Seven Belgian industrialists will tour the Goodyear plant of Rogers Corporation Tuesday as part of the team's seven-week study of general problems, organization methods, and human relations in American industry. Headquarters for Rogers is in Manchester. The seven men represent cross-section of engineering fields, materials fabricating and social work.

Saul M. Silverstein of Manchester, president of Rogers, has been active in information exchange programs between Belgium and this country. Last year he served in Belgium as a member of a five-man team conducting management seminars under the auspices of the Mutual Security Agency. Silverstein lectured on marketing.

During the four weeks he actually conducted seminars, Silverstein visited 18 plants in his official capacity and two unofficially. He slid down the shafts of a Belgian coal mine to talk with miners and dined in the finest restaurants with the heads of Belgium's greatest industries.

Silverstein has recently served in Paris with a team representing the National Management Coun-

Above Top:  
Manchester Evening  
Herald reports on  
Silverstein's trip  
around the world.

Above: Rogers hosts  
international visitors  
circa 1950s. Source  
unknown.





Above: Saul M. Silverstein,  
from the 1949 Annual Report.

*S.M. Silverstein*

headquarters to observe labor/management relations. Saul also traveled extensively on behalf of industry organizations such as the Council for International Progress in Management and International Management Conference. In all, he took at least 28 foreign trips, ten of which were around the world, lecturing in almost every country he visited.

Saul M. Silverstein enjoyed a good drink “because drinking promotes talking, and he loved to talk,” said Harry. “I think it was his management style. He knew a cocktail was a lubricant for bringing out issues that might be bothering someone. He often suggested walking over to the Ridgewood Inn and, over a drink, he’d find out what’s going on.”

No doubt that Saul’s love for people also influenced his work in labor relations. In 1933, Saul called several employees together and said, “You need to organize.” Workers eventually voted to join the International Brotherhood of Papermakers, AFL. Saul championed the rights and needs of Rogers employees and was always willing to try new ideas that might be of benefit. In 1938, when workers threatened to strike, Saul created a “Room for Understanding” where management and workers could meet in a neutral space to air grievances and discuss plant production. Through the mutual efforts of both management and the Union, Rogers implemented a number of innovative benefit programs including a cost-of-living wage index in 1942, six years before General Motors instituted a similar program. In 1949, Rogers was one of the first companies to implement a profit sharing plan.

Saul’s work in labor relations garnered him international acclaim, and executives from around the world visited the Rogers

Saul was also responsible for the company’s forward thinking in its hiring processes. In 1948, Rogers began work on a personnel audit in collaboration with the Psychological Corporation of New York. Saul had become friends with John Foley, known for his early work on conditioned responses in primates and abnormal behavior of humans, and later for his work in industrial psychology. Foley’s interest in evaluation and training led him to a position as Director of the Psychological Corporation’s Industrial Division and eventually to the establishment of his own consulting organization, J.P. Foley and Associates. Rogers used Foley’s services extensively to hire management and select personnel, including Harry Birkenruth. The practice honed Rogers’ focus on finding the right people and then helping them develop to their fullest potential and talent.

Before his tenure at Rogers, Saul earned his bachelor’s and master’s degrees in chemical engineering at MIT. He also did research work for Guggenheim Brothers before joining the International Research Division of BKW. He earned numerous national and international awards for his work in industrial management.

Outside work, Saul was involved civically throughout Manchester, serving on city and school board committees. He organized Manchester’s Temple Beth Shalom. He retired in 1971 and died a year later in Tanzania while on his tenth around-the-world trip.



# "Rogers-Bords Are Everywhere"

"You name it and we'll make it. All this Division needs is a blueprint." Rogers launches an aggressive marketing campaign to sell top-grade paperboard products manufactured using a wet machine process which can be adapted in limitless ways depending on customer needs.

Vinsol  
Vinyl Resins  
Zein

Fillers: Carbon Black  
Clay  
Graphite  
Red Oxide

Resins and Resinous Materials: Asphalt  
Gluten  
Lignin  
Melamines  
Paraffin Wax  
Phenolic Resins (Bakelite)  
Polyfibre  
Polystyrene  
Rosin  
Rubber (natural and synthetic)  
Soy Bean Resin  
Starch  
Ureas

## 1947

Silverstein calls 1947 "the most encouraging and profitable year in the 115-year history of the company." Sales rise 57 percent to establish an all-time peak, and the company's net profit after taxes is \$191,114 compared to \$77,036 in 1946 and \$46,724 in 1945. Furthermore, peace and cooperation between labor and management continue in post-war period. A newly instituted system of adjusting base pay every three months according to the national cost of living index contributes to harmonious relations.

Right: Articles from the *Manchester Evening Herald*, 1946, and the *Windham County Transcript*, 1947, discuss Rogers Corporation growth and success.

### Rogers Reports A Record Year

#### Local Corporation Enjoys Most Profitable Period in 115 Years

"The most encouraging and profitable year in the 115-year history" of the company has been reported to Rogers Corporation stockholders by S. M. Silverstein, company president, in his annual report for 1947. The company has plants in Manchester and Goodyear.

The report said that "dollar sales rose 57 per cent to establish an all-time peak." Net profit for 1947



Saul M. Silverstein

was \$191,114, as compared with \$77,036 in 1946, and \$46,724 in 1945. The company's net worth increased from \$893,355 in 1946 to \$1,034,562 in 1947.

Employee Earnings Rise After stating that employees

ED TO GAIN MERE QUANTITY

\$2.00 A YEAR

### Rogers Corporation 10 Years At Go

#### Old American Concern Established in Operated Solely in Manchester Ur Of Local Plant in 1937.

On July 18 the Rogers Corporation will have been in Goodyear for ten years. An old American Company established in 1832, Rogers had, up until 1937, centered all its operations in Manchester. When an expansion of facilities became necessary, the large mill and related buildings in Goodyear were purchased.

Before 1937 the company employed no one in Goodyear and manufactured a limited number of fibrous materials in its Manchester plants. Today Rogers employs 210 people at the Goodyear plant and makes a wide variety of fibrous materials. In addition, the company has a Fabricating Division which manufactures parts out of its materials for use by a large number of industries, including electrical and electronics equipment and radio manufacturers.

Simultaneously with the acquisition of the Goodyear facilities, Rogers launched a program of intensive research and development. The objective was two-fold—to improve existing Rogers products and to create new ones. This program led promptly to profitable diversification. It enabled Rogers to take advantage of both sudden and long range developments in the field of industrial materials.

was used for many applications. Since the war, the demand for pocket knives, as grips for housing for applications.

Industry: more accurate material still greater the near future useful because expensive by approximately finished product in a form it can be used to reduce large quantities to be molded. In its special material industrial of supplying sheet form less than they need the meth



# 1948

Psychological Corporation, a New York consulting firm, is contracted to assist in personnel selection. Novel at the time, the move sets the tone for future Rogers practices that emphasize personality fit during the hiring process.

Below: A description of psychological research for business used by the Psychological Corporation published in the *Annals of the American Academy of Political and Social Science*, Nov. 1923.

## THE PSYCHOLOGICAL CORPORATION

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can be met; at the same time employment can be given to many psychologists. A graduate student could earn his expenses through the university by making two standardized tests a day and at the same time obtain training useful to him. More experienced psychologists can make personal examinations that may ultimately become as essential as those of the physician. Here the Corporation may be of service in maintaining high standards of skill and honesty and by letting the public know who have such qualifications.

### PSYCHOLOGICAL RESEARCH IN BUSINESS

Manufacturers and business men are psychologists in the selection of employes and in dealing with them, in buying and selling, in the whole conduct of their affairs, to the extent that farmers are biologists in raising plants and animals. In both cases tradition and everyday intelligence should be supplemented by scientific methods. Agricultural productivity has perhaps been doubled, industrial productivity has perhaps been quadrupled, by science and invention. There is every reason to believe that psychology in the coming century will parallel the service rendered in the past century by the physical and biological sciences. By selecting individuals for the work for which they are best fit, by training them in the best ways for the work, by arranging conditions so that the work is most efficient, we can again increase the average wealth that each will create and may enjoy.

It is easy to give examples of definite directions in which psychology can at present be of use beyond its cost and in which the service could be enhanced by research that it would be profitable to undertake. Thus there are three types of people intergrading but often well defined—those most satisfied

with persons, with material objects, and with abstractions such as words and figures. In the transportation services most of the employes have functions separated on the lines of these three types. The clerks, bookkeepers and stenographers are concerned with words and figures. The conductors and pursers must remember faces, be obliging, ready to answer questions, interested in the affairs of the passengers; these traits are disqualifications for motormen and engineers, who should be concerned about objects and machines. By a rough natural selection those tend to become clerks, conductors or engineers who are best suited for the work, but probably over 10 per cent of the employes could be transferred with an average increase of more than 10 per cent in their efficiency; new employes could from the start be assigned to work for which they are best fitted. By the use of the psychological tests that we now have and by research to perfect these tests, the corporations concerned with transportation could effect a direct saving measured by tens of millions of dollars a year, indirectly of a comparable sum through the greater welfare and contentment of their employes.

Apart from the suffering they cause, the cost of accidents and deaths in transportation, factories and mines is enormous. These accidents could be avoided in large measure by proper selection of men for the work they do, by correct training to meet its contingencies, by the adjustment of machines and conditions to suit the human mechanism. This is a psychological situation now partly within our control, one that can be solved by research. There are numerous other problems—the hours of labor, fatigue, interest, good will, efficiency and the

55

FIVE CENTS

ation  
Goodyear

ed in 1832 Formerly  
Until Acquisition

d for a wide variety of applications such as bayonets, handles and canteen caps. In war, its uses have branched rapidly. It is being employed for pocket knife and machete handles, grips on pinkie shears, as a material for small motors, and other applications too numerous to mention.

Industry is becoming more and more acquainted with this new plastic material, and it is expected that greater use will be made of it in the near future. It is all the more so because it can be blanketed into any desired form which roughly approximates the shape of the desired product or it can be provided in a granular form. In the latter case it can be pressed into pills, a method of prefabrication that helps reduce manufacturing costs where large quantities of a plastic piece are to be molded.

Establishing a Fabricating Division, Rogers felt that it could offer specialized knowledge of fibrous material in still another phase of industrial operations. Rogers has been molding its products to industry in this form. The individual companies then fabricate it into the parts needed. In many cases, either the method of fabricating is slow or else



# The People Behind Rogers

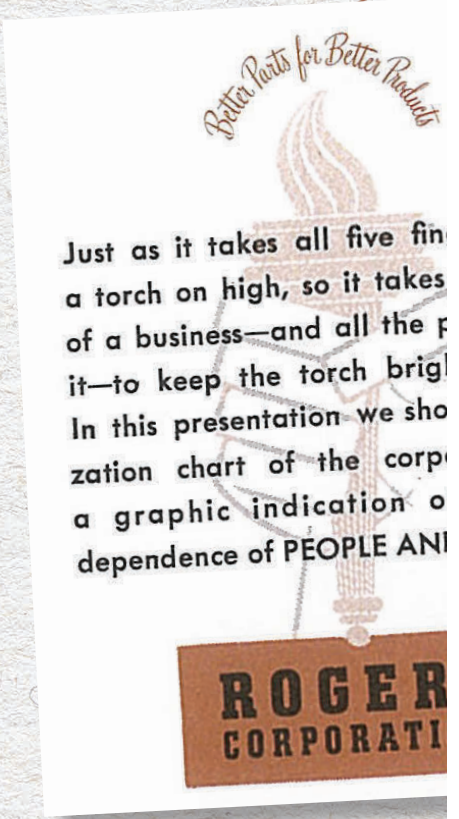
In the early 1900s, American management, recognizing that productivity and efficiency affect a company's bottom line, began taking into consideration the importance of finding the right kind of people to do specific jobs. Human resource management became a popular business concept, and Rogers was among the early adopters in using management principles in its hiring, training and compensation techniques.

Rogers President Saul Silverstein had a passion for people, and it was he who befriended John Foley, an early investor in Rogers back in the early 1920s but also an expert in personnel consulting. Under Foley's direction, Rogers began a strategic, companywide approach to personnel assessment and selection that included extensive interviews and other testing procedures to make certain that a prospective employee and Rogers would be a good match. The result was a very low turnover rate—especially in administrative and managerial positions. Career flexibility, a move that encouraged employees to move around within the company, along with in-company training, professional seminars and conferences, tuition aid programs for undergraduate and graduate courses and special work assignments—were implemented to help Rogers employees develop their potential. Above all, Rogers adopted the viewpoint that employees were human resources and the company had an obligation to treat them with dignity and trust while helping them develop and live up to their full potential and talent.

Such insight fostered the Rogers' culture still felt today, one where ideas and technology are essential, but where the people matter most. "I worked with people of character," said Stu Rivers, former Rogers Union President. "They were all different, but they were all trustworthy, especially the people a generation ahead of me. They taught us how to do things in the plant, how to run a union meeting...they cared. And because they cared, we paid attention and learned from them."

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H. M.  
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P. H.  
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Prov  
W. B.  
Pres  
Gen  
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Hart  
S. M. S.  
Preside  
Generc



Right: From the 1955 Rogers' Annual Report.



**SALES**

Vice President and Sales Manager  
R. A. ST. LAURENT (48)-(20)

**DEVELOPMENT**

Chairman  
S. M. SILVERSTEIN (49)-(20)

**SUPERVISOR**  
N. L. Greenman (26)-(2)

**ENGINEER**  
R. C. Berry (21)-(1)

**QUALITY CONTROL**  
F. J. Jones (29)-(8)

**TESTER**  
M. Pappas

**TECHNICIAN**  
F. Henriques

**PERSONNEL**

Director  
M. E. YEOMAN (41)-(20)

**268  
EMPLOYEES**

**FINANCE**

Treasurer and Secretary  
R. F. HAWLEY (52)-(26)

**ACCOUNTING**  
J. E. Witkowski (40)-(12)

**BOOKKEEPER**  
R. H. Greene

**MANCHESTER TELEPHONE**  
Miss Olive Andrews

**COST CONTROL**  
G. A. MacDonald (39)-(1)

**MANCHESTER PAYROLL**  
A. S. Clarke

**GOODYEAR PAYROLL**  
R. H. Lamb

**COSTS AND RECORDS**  
A. A. Lerneuld  
H. Cooper

**GOODYEAR TELEPHONE**  
Mrs. F. Lamb

**PURCHASING**  
G. R. Janvrin, Jr. (29)-(2)

**CLERK**  
Mrs. A. Del Pasco

**STOREROOM**  
F. R. Anderson

**MAINTENANCE AND CONSTRUCTION**

**PRODUCTION**

Vice President and  
Production Manager  
S. A. BROWN (42)-(20)

**GOODYEAR DIVISION**

**SUPERINTENDENT** — S. Baker (33)-(10)

**SUPERVISOR-MAKING** — G. L. MacKinnon (25)-(2)

**SCHEDULES** — R. S. Miskivitch

**FOREMEN**  
S. J. Galas V. Dvarcas P. Chapman

**WAREHOUSE**  
RAGS AND PULPS  
ROTARIES

**BEATERS**  
MACHINES  
DRYING

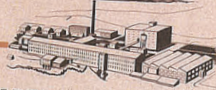
**SUPERVISOR-FINISHING** — J. G. Kempes (46)-(32)

**DAMPENER**  
GLAZERS  
CALENDERS

**SLITTERS**  
INSPECTION  
SHIPPING

**DEVELOPMENT** — J. A. Correia (33)-(12)

\* PRESIDENT, OAK LODGE, No. 43  
Napoleon Racine



**FABRICATING DIVISION**

**SUPERINTENDENT** — S. Baker (33)-(10)

**COORDINATOR** — S. B. Ferris (38)-(6)

**CLERK** — S. G. Billings

**STENO-CLERKS**  
Miss H. Kuszaj Miss E. Cooke

**SUPERVISOR** — F. R. Judd (36)-(1)

**PRESSES**  
SLITTING  
CUFFING  
TREATING

**ASSEMBLING**  
COMBINING  
EMBOSSING  
PRINTING

**INSPECTION**

**DEVELOPMENT** — J. A. Kaczor (36)-(13)

**DIE SHOP**

**DRAFTSMAN** — R. A. Bonneville

\* PRESIDENT, OAK LODGE, No. 43  
Napoleon Racine

**MANCHESTER DIVISION**

**SUPERINTENDENT** — C. G. Maron (27)-(9)

**LABORATORY** — E. Dowding

**RECEIVING**  
RESINS  
ROTARY  
BEATERS  
MACHINE

**DRYING**  
FINISHING  
MOLDICE  
EXTRUSION  
LAMINATING

**SHIPPING**

**DEVELOPMENT** — E. J. Sweeney (34)-(15)

\* PRESIDENT,  
MAPLE LODGE, No. 554  
Bernard Bohme



**AT HEADQUARTERS**

**COORDINATOR AND SCHEDULES**  
A. Schillinger (30)-(3)

**TRAFFIC AND EXPEDITOR**  
A. Campbell

**RECORDS**  
Mrs. M. Mullaney

**STENO-CLERKS**  
Mrs. K. Robbins  
Mrs. P. Backofen

**IN THE FIELD**

**ELECTRICAL INSULATION DIVISION**  
R. A. St. Laurent (48)-(20)

**PLASTICS, FABRICATING, DUROIDS**  
**ASSISTANT SALES MANAGER**  
T. H. Johnston (35)-(9)

**HEADQUARTERS**  
L. F. Hanson  
H. E. Brooks

**SPECIAL ASSIGNMENTS**  
F. Cosgrove

**NEW YORK CITY**  
D. R. Dunay

**NEW ENGLAND**  
G. D. Smith

**ROCHESTER, N. Y.**  
J. Beach

**PHILADELPHIA, PA.**  
D. Gawthrop

**DETROIT, MICHIGAN**  
W. B. Haey

**MILWAUKEE, WISC.**  
C. Lyle

**PITTSBURGH, PA.**  
R. Walliser

**SHOE PRODUCTS DIVISION**  
**MANAGER**  
B. B. Levy (43)-(5)

**BOARD OF DIRECTORS**

P. C. GIFFORD, Chairman  
Gifford & Co.  
Providence, R. I.

H. J. BLAIS  
President, New England  
Bakery, Inc.  
Pawtucket, R. I.

R. F. HAWLEY  
Treasurer and Secretary

H. M. HERBENER  
Management Consultant  
Thomasville, Ga.

P. H. HODGE  
Attorney  
Worrell & Hodge  
Providence, R. I.

W. B. ROGERS  
President and  
General Manager  
Hotel Bond Corp.  
Hartford, Conn.

S. M. SILVERSTEIN  
President and  
General Manager

**PRESIDENT AND GENERAL MANAGER**

S. M. SILVERSTEIN (49)-(20)

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AND PRODUCTS.

**RS  
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"The list of successful company presidents shows former lawyers, engineers, salesmen and accountants. But they were not successful presidents just because they were good lawyers, engineers, salesmen or accountants. They're successful because they know how to learn why about a lot of different things. And they're where they are because someone else worried less about training them and more about selecting them."

—From Here's Rogers Again publication



# 1948

Revenue grows to \$3 million with over half coming from sales of electrical insulation for power transformers. Rogers continues to produce phenolic resin plastics, fiber-reinforced materials combining resins and paperboard used for midsoles in shoes, sheet materials that can be cut, formed, drawn, bent and punched for automobile gaskets, radio and TV antenna backs, electrical motor insulation, athletic protective equipment and other applications.

# 1949

The first grades of fiber-reinforced polymer materials, Duroid®, is introduced to make gaskets, filters and insulation for electric devices.

# 1950

Rogers has 500 customers divided between four types of business and now sells over half of the total electrical insulation products used in the power industry.

Right Middle: Duroid® sales literature, 1949.







Above: June 1952.

Below: *Rogers Reporter*, July 1957.

# 1952

The *Rogers Reporter* is created to report on company news such as President Silverstein's views of Europe. It is duplicated at the home office on a Ditto Machine and mailed in envelopes to readers. Later, in 1957, Allied Printing Services, Inc., takes over production and mailing.





# 1954

Residents in Goodyear, the village in Williamsville, Connecticut, vote to rename the town Rogers. The name change is effective August 1.



*"Better parts for better products"*



Above: The Belgian Productivity Team, photographed at the Goodyear plant in May 1953.

Rogers publishes *Here's Rogers Again*, a booklet explaining new technologies the company is using to create innovative, technologically advanced products.

Below: *Here's Rogers Again* booklet interior.

### HERE'S ANOTHER BOOKLET WITH TOO MUCH TO READ

But it still offers the light touch in heavy reading.

If, after reading some of it, you feel a need for relief, by way of pictures, stand in the doorway to your manufacturing or office area and watch the human, moving picture in there.

For that's what most of this booklet is about.

### IT'S A SORT OF MATURED SEQUEL TO AN EARLIER BOOKLET

"Here's Rogers", the earlier too-much-to-read booklet which we have had to reprint, did several things. It gave us some favorable publicity, bits of philosophy in it were found to be helpful by some people, it brought us some new ideas, and led to a few sales.

If you don't care to give us publicity after reading this, and can't go along with the philosophy, don't be concerned for a moment. We will gladly settle for a new idea, or an order.

The above is by way of explanation to those thoughtful readers who may wonder why a

### TABLE OF CONTENTS

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- Totem poles are not good organization charts .....
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# A Company Town

Williamsville, Connecticut, was founded in 1827 by Caleb Williams, who purchased building privileges on the Quinebaug River to build a cotton factory. The factory prospered and the

village expanded as new mills were opened. In 1911, Robert Boys took over the mills and organized Killingly Manufacturing Company to make tire duck for the automotive industry. The next year, Goodyear Tire and Rubber Company purchased the company and in 1913, took over all buildings and changed the name to the village of Goodyear.

As early as 1931, Rogers began looking for a central location for its operations, but any move was postponed during the Great Depression. However, by 1936 the company was ready to make a move. In the prior year, Rogers had secured more business than it could handle, but subsequently lost customers because of delivery issues and

inconsistency in the quality of materials. The mills were old-fashioned and expensive to run. More importantly, they could not produce materials in the quantity and quality that customers demanded. The solution was to purchase a plant in Goodyear "on a most advantageous basis," with more than enough space to accommodate the existing manufacturing facilities in Manchester plus additional capacity for later consolidation.



Above: United States Post Office 1954 reflects name change to Rogers, Connecticut.

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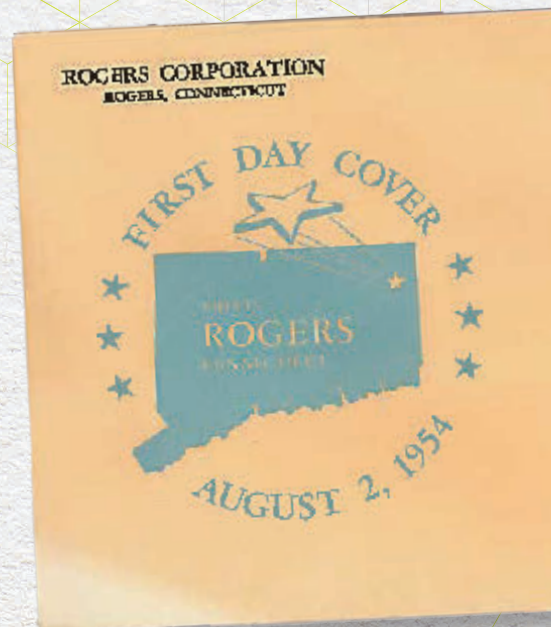


From the start, relocation turned out to be a quagmire. The unstable economy and drastic fluctuations in the electrical industry frustrated Rogers' attempt at a quick transition from Manchester to Goodyear. It cost over \$400,000 to revamp the new site for production, yet without the move, Rogers would not have survived.

In the late 1930s, the company continued to pump time, money and effort into the Goodyear plant, hoping for the best. However, a sharp decline in business in 1937 forced the Goodyear plant to close through October 1938. When the plant finally reopened to fill a large order for General Electric (GE), new problems surfaced. The new GE contract included specifications that made the loft drying facilities at the East Mill obsolete. New continuous dryers at the Goodyear plant made it possible to dry board in one continuous operation in less than two hours compared to the two-to-three days needed in loft drying. The only problem was that the paper machines were still in Manchester, forcing Rogers to transport wet sheets, comprised of 66 percent water, from the machines in Manchester to the dryers in Goodyear and then back again to Manchester for finishing—35 miles each way. It wasn't until 1941 when the renovation of the Goodyear Mill was completed and the East Mill and West Mill shut down that Rogers reaped the savings in production costs, process efficiency and improved quality control.

Thirteen years later in 1954, Norm Greenman, then Manager of Development for Rogers, led a move to change the name of the village from Goodyear to Rogers. It was more than a cosmetic change; the address had often led people to believe that Rogers was a subsidiary of Goodyear Tire and Rubber when in fact, Rogers was a Goodyear competitor.

A petition was circulated and letters were sent explaining the reason for the name change. On August 2, 1954, after the majority of the 200 residents voted for the change and upon approval from the U.S. Post Office, the village changed its name again, this time to Rogers.



Above: Letter from the first day of the U.S. Post Office's "Rogers, Conn." stamp.



First Day



Mr. Saul M. Silverstein  
28 Stephen Street  
Manchester, Connecticut

## Change Name Of Goodyear, Now Rogers

The Post Office Dept. in Washington has announced that the name of the village of Goodyear, in the town of Killingly, will be changed to Rogers, effective Aug. 1.

The name-change request was made by Rogers Corp., which recently moved most of its operations to the village from Manchester, where it had been founded in 1832. It is now the largest employer in Goodyear.

The company, which produces chemical-and-fiber specialty materials and plastics, wanted the name change because of the confusion and embarrassment stemming from the fact that the village bore the name of Goodyear Rubber Co., which had once been located there, and which makes some of the same products.

"We at Rogers felt it was necessary to change the name of the post office because every cancellation mark on our business mail was, in effect, an advertisement for one of our competitors," a spokesman for the company said today.

The Post Office Dept. decision to change the name followed the presentation of a petition of the majority of boxholders at the Goodyear Post Office. The petition was verified by an independent post office survey.

Norman Greenman, speaking for the local name-change committee, said today he is "very pleased that a majority of persons residing here have indicated they favor the name change," and, he added, "the committee is also grateful to the Post Office Dept. for agreeing to the name change."

Ceremonies marking the change

are scheduled for 10 a. m. Aug. 2. In a statement issued by Edgar Proulx, local postmaster, he acknowledged receipt of official instructions from the Bureau of Post Office Operations and reminded patrons that forms for notifying correspondents of the post office name change are available from his office.

Greenman emphasized that the change would cause no inconvenience or expense to residents or business firms. Rogers Corporation, he said, was "ready to offer advice or assistance on any legal forms requiring changes because of the name change, will replace any stationery bearing the 'Goodyear' imprint, and we will file the necessary legal papers so that the name change will automatically be put into effect for all legal forms."

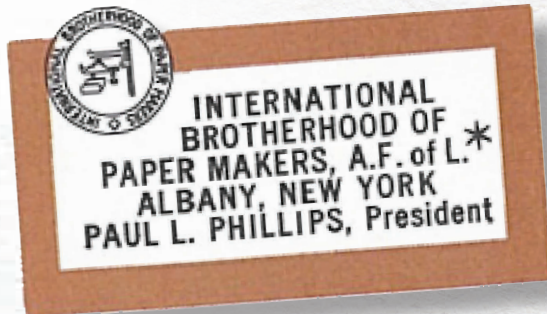
Our distributors have been seriously embarrassed in their commitments and delivery conditions are such that we are building up customer antagonism which is a perfect stimulant for the competition. Time and again we have learned that competitors have been encouraged to handle this field solely because of our delivery record. Because of inadequate facilities, we are over 150,000 pounds behind on our shipments of motor slot papers. The demand for transformer board has been increasing, but has not yet reached record proportions. We are convinced that anything approaching a normal demand for transformer board would find us hopelessly behind on all deliveries, unless the Bakelite-Rogers program is abandoned and the North Mill devoted entirely to Rogers production.

Above: A description of Rogers' delivery issues from a 1936 letter.

Below: Article documenting town's name change in 1954.



# "Firm but Fair:" Labor Relations at Rogers



Left: From the 1949 Rogers Annual Report.

Below: From the 1955 Rogers Annual Report.

One of the highlights of the year 1955 was the selection of Rogers Corporation to pioneer a new Labor-Management technique; the negotiation of an annual agreement with a union over closed circuit television. The American Management Association financed this project and arranged for a kinescope of the proceedings, which were witnessed by more than 1800 personnel managers. The film is now available for sale and rental and has resulted in widespread favorable publicity for Rogers.

## WHAT WE KNOW ABOUT WHITE COLLAR UNIONS

Much to the horror of some of our top management people, we deliberately encouraged a white collar union at Rogers.

We did it because we discovered that, while we had done a pretty good job of communicating with our hourly people through their two union locals, we had been taking the white collar group for granted.

Whenever we had a "social," all kinds of white collar gripes would come bubbling to the top of the beer. Some of them were like this:

Left: Union perspective from 1954 *Here's Rogers Again* publication.

Right: "The Donkey Cartoon" made the rounds during the 1950s, and as the *Here's Rogers Again* company booklet says, it "has virtually become our trademark. It has been liberally posted on our premises and shown just about everywhere we talk about the subject."



Left: 1954 *Forbes Magazine* article discussing the early success of Rogers' unique approach to labor relations.

As far as above has been shown just subject.

## FORBES

AUGUST 1, 1954 VOL. 74, NO. 3

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### LABOR RELATIONS

#### Bargaining on the installment plan

Once a month in the small town of Rogers, Connecticut, a couple of nice young ladies, accompanied by a group of shirt-sleeved, open-collared males, take their places around a table and talk. Sometimes their conversation is sheer banter, sometimes it's serious, and occasionally the gentlemen forget their New England manners and shock the delicate ears of the eager-listening Misses. These monthly get-togethers are a new kind of collective bargaining.

The traditional pattern of union-management negotiations in this country is to meet once a year, hem, haw, holler and bang, and then sign

conditions, you may put the customer out of business. Trying to put human relations on the shelf this way may put you out of business in terms of getting your money's worth out of workers living under long-term agreements.

"Instead of putting on a show of many horrible scenes once each year, we work at it each month in our regular labor management meetings. The minutes of these meetings are called 'memoranda of understand-



Lawrence Stessin

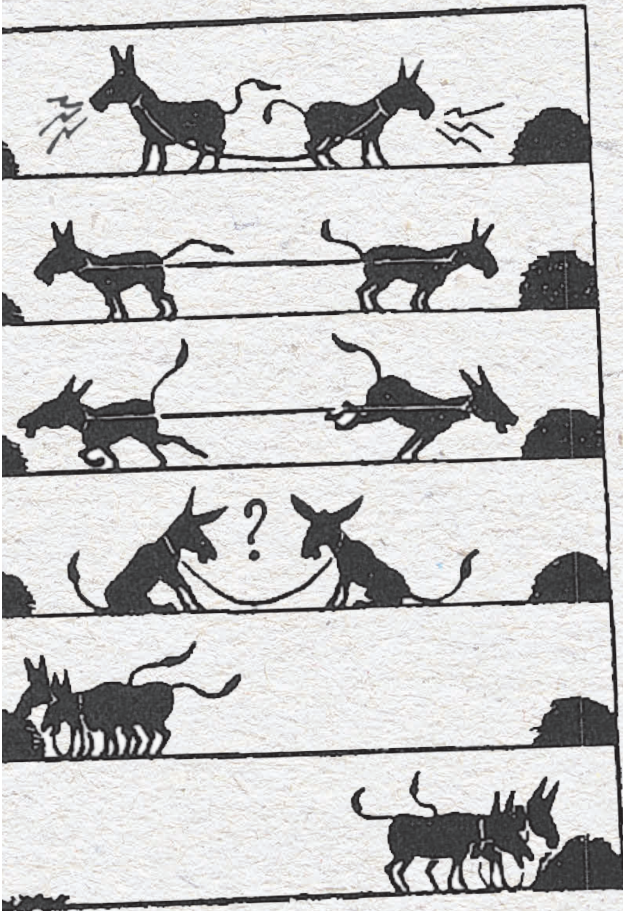




Above: The labor agreement signing banquet, held at Ben Grosvenor Inn on January 25, 1954.



Above: The Oak Lodge Installation Banquet, 1964.



As far as our labor relations go, the cartoon has virtually become our trademark. It is liberally posted on our premises and must about everywhere we talk about the

Below: From the October 1967 Manchester Evening Herald.

## Manchester Evening Herald

October, 1967

# Rogers Union Asks Authority to Strike

A strike against the Rogers Corporation by more than 600 employees in its Manchester, Willimantic and Rogers plants may be in the offing if company officials fail to meet union demands for a new contract.

Union locals in the three plants have tentatively called a meeting Oct. 8, at which members will be asked to authorize a strike vote, according to George Fratus, recording secretary for the Manchester local. The existing contract at all three plants expires Monday. The workers are represented by the national United Papermakers and Paperworkers Union, AFL-CIO. There are about 120 members at the three plants.

Fratus said the possibility of a strike looms because management has not yet replied to a list of demands for a new contract currently being negotiated. The existing two-year contract was signed in November, 1965, after some two and one-half months of negotiations.

Thomas Johnston, vice president in charge of production. "We just received the union's whole package demands Thursday and as far as I am concerned we are still in negotiations," he said. "We intend to sign a contract."

Johnston declined to comment further, except to note that for "many years" the company-employee contract has contained a clause providing for workers to continue under a contract after its expiration as long as negotiations toward a new one are being conducted.

Employees at the firm's new \$1 million facility at Chandler, Ariz., would not be effected by a strike vote at the Connecticut plants. The Chandler branch, which began operations early this year, has several hundred employees.





Left: The 1955 Foreign Team gathers for dinner.

On November 13, 1955, we had a luncheon for our workers and neighbors and presented a Certificate of Cooperation to all individuals and organizations that helped us during the trying days of the flood.

Above and Right: Recognition of dedicated Rogers employees after the August 1955 flood, as reported in the 1955 Rogers Annual Report.

The cooperation of our workers, both before and after the flood, has been equal to the high standard of the past and, naturally, we are proud of this record. On December 16, 1955, the Rogers Directors took the following action:

**“VOTED:** That this Board go on record as commending management and employees of the Corporation for their excellent cooperation during the flood emergency of August 19, 1955, and that this commendation be made a part of the Annual Report to Stockholders.”

# 1955

The worst flood in the history of Eastern Connecticut strikes the town of Rogers, disrupting company operations. The plant and office buildings sustain damage. Anticipating the potential devastating impact of the storm surge, Rogers personnel move equipment and files to upper levels prior to flood water rising. Such dedication from employees helps Rogers minimize damage and resume production within three weeks following the flood.





Above: The town of Rogers after the 1955 flood.



# ROGERS



# REPORTER

Vol. VII, No. 15, Rogers Corporation, Rogers-Manchester, Connecticut September 8, 1955

Subject: OPERATION NIGHTMARE, or NINETEEN DAYS OF HELL!  
August 19 - September 7, 1955

From: SMS

To: Friends of Rogers

Since 9:00 AM, Friday, August 19, 1955, all of the people living and/or working in Rogers, Connecticut, have come to grips with the normally peaceful Quinebaug River, that went berserk - and have come out on top! We are particularly happy to report no local personal injuries, but our collective nerves and muscles took a real beating - along with our pocketbooks!

Throughout this report, I will refrain from mentioning the names of countless, wonderful Rogers workers, neighbors and friends who did so much; beyond the call of duty. There were no exceptions! Hence, I might inadvertently overlook somebody, if I tried to list all individuals who helped. We love you all! Thanks!

Let's start with Black Friday - the 19th! All through Thursday night and into Friday, torrential rains were our lot - thanks to Hurricane Diane! By 9:00 AM, it became apparent that many of the dams upstream were headed for trouble, so we were alerted for another 1938 mess. Preparations for shutting down were organized and the number one project was the evacuation of our Finishing Room. Back in 1938, it was under 5 feet of water. All Finishing motors were removed to the second floor, the machinery greased and the elevator kept running constantly from 9:00 AM until 3:28 PM, moving inventory to higher levels. At this time of the month, our stocks are at their peak, so finding enough higher level space became a serious problem. This forced us to use the Machine Room, which is 5 feet higher than Finishing and almost unaffected in 1938. This part of our labor proved futile, because 1955 left us with 9 feet of water in Finishing and 4 feet in the Machine Room! What a mess!

In the meantime, as the waters kept rising, our boilers, fuses, fire trucks, materials handling equipment and countless other details had been attended to. Just before the U. S. Army Engineers forced our Evacuation Squads to leave, they made a last minute assault on our newly decorated Offices - 2 feet higher than the Machine Room and well above 1938 water levels. They piled all movable files, records, business machines, chairs and supplies on top of the desks - and even tied up the drapes! Well - we had a mere 2 feet of water in the Offices! Think of what might have happened if our workers were less zealous! Actual



Above: A September 7, 1955, article in the *Rogers Reporter* about the flood that occurred when the Quinebaug River "went berserk."

Right: Miscellaneous images from the Rogers Corporation archives.



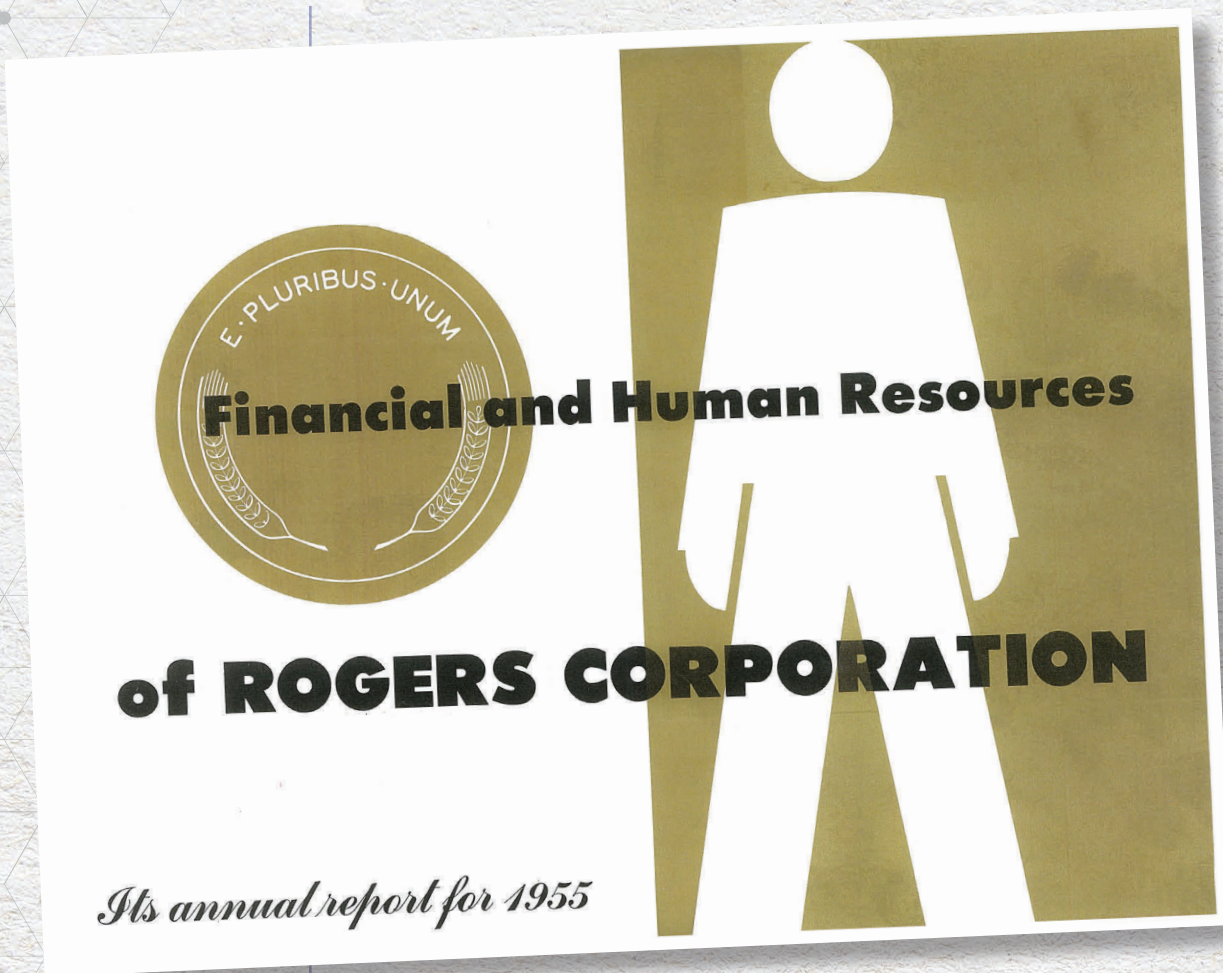




# 1956

Rogers acquires an elastomer fabrication company, the Cellular Rubber Products Company in Willimantic, Connecticut, later known as the Willimantic Division.

The company develops Mektron<sup>®</sup>, molded circuits for use in switches and timers in appliances, automobiles and other industrial applications.



Above: Cover of the 1955 Rogers Annual Report.

# 1957

Rogers celebrates its 125th anniversary.



*"To create and fabricate unique materials, that is the job of the Rogers Corporation... From our beginnings as a producer of specialty paper products, we've increased to many times our original size; and today we are a major supplier of non-metallic materials of all sorts to such widely diversified interests as the electrical, plastics, automotive and shoe industries."*

—Rogers Corporation 1955 Annual Report

# 1958

Duroid® 5600 is used in the Jupiter space vehicle as electronic window material, the company's first foray into the Space Age.

Our research and development program is proceeding with increased intensity, paced by our newly developed Reinforced Teflon, DUROID 5600. This material, with its combination of high temperature resistance, chemical resistance and electrical insulating properties has great promise for applications in the aircraft, chemical and electronics industries. Companion products are under development to take advantage of increasing industrial needs for high temperature materials.

Above: Article from the 1955 Rogers Annual Report.



# Rogers in Space

Since the dawn of the Space Age, Rogers has provided the aerospace industry with highly technical, durable materials solutions. In the 1950s, Rogers' random glass fiber-reinforced PTFE material (RT/duroid®) was used in antenna windows in the PGM-19 Jupiter medium range ballistic missile.

By the 1970s, many space programs began to use microstrip circuits made from Rogers RT/duroid® 5000 laminates for high frequency command and data communication systems. According to company history, the Voyager 1 and Voyager 2 deep space explorers, launched in 1977, used RT/duroid® 5000 laminates. The probes completed their original mission to explore Jupiter, Saturn, Uranus and Neptune, and then extended their mission by continuing into deep space in 2012 and 2018, respectively, becoming the first man-made objects to leave our solar system. Forty-five years later, the probes are more than 18 billion kilometers from the sun and continuing to transmit data to NASA. In the intervening years, Rogers developed additional materials including RT/duroid® 6000 laminates and TMM® Temperature stable laminates widely used in space exploration and satellite communication systems including NASA's Mars landers and rovers.



Left: On the Apollo moon landing program and the Space Shuttle, RT/duroid® PTFE composites did critical jobs in self-lubricating bearing parts and in microwave circuitry and antennas where stability in temperature extremes and radiation was essential.

Above: The nose cone of Jupiter missile AM-18 before flight.





Above: RT/duroid® PTFE composites were used in microwave circuitry and antennas for the Space Shuttle program.



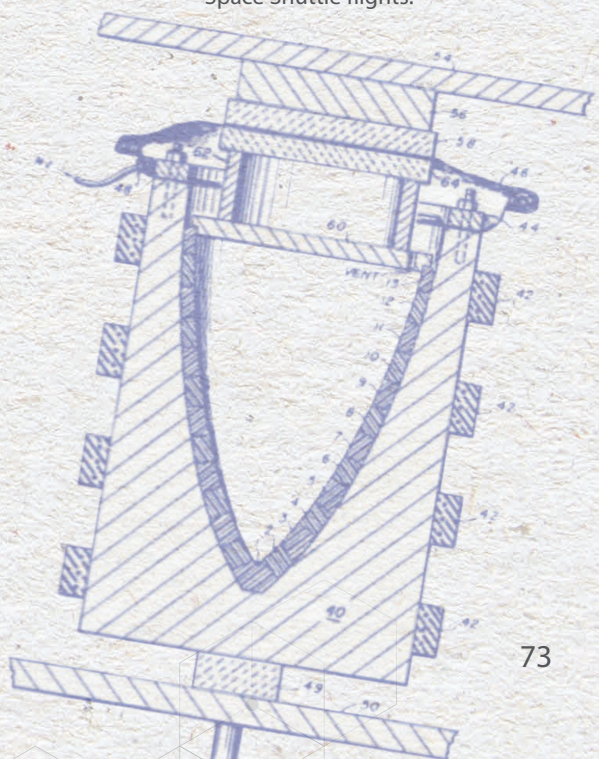
Above: Radome for Pershing II missile uses RT/duroid® to permit microwave transmission and to provide resistance to ablation, rain erosion and handling damage.



Left: Bearings made from Rogers' RT/duroid® operate without lubrication and permit functioning of the remote manipulator used on Space Shuttle flights.

In the 1980s, similar materials were adapted for use as ablative PTFE composite radomes (nose cones) for missiles because of their high strength and ability to resist extreme heat and wear. The RT/duroid® 5870M material was used in the radome for the Pershing II missile.

Rogers also adapted the RT/duroid® products for high quality bearings, adding bronze powder and molybdenum disulfide to improve their heat and wear resistance. Prominent applications include the Apollo Lunar Excursion Module, the "manipulator arm" for the Space Shuttle, and the wing support bearings for the B-2 bomber for the United States Air Force.





## Chapter 4

# Global Expansion and Inspired Innovation

(1958-1990)

By the 1960s, Rogers had grown into a small but successful firm 130 years strong. Real growth had begun in the late 1950s with long-term planning that emphasized doubling sales and earnings every five years and developing new markets and materials. To reach its growth potential, particularly in the new electronics industry, Rogers set to work creating new and unique materials with polymers and chemicals.

Consequently, the success of the 1960s and 1970s was built on strategic planning from Rogers in prior decades. New technology, investments in Research and Development and considerable expansion of facilities, including a move overseas, laid the foundation for Rogers to be involved in the newest, most promising trends in American industry—all while retaining their reputation for expertise and reliability. The company was also ready to be acknowledged as the industry leader it had become. In 1960, company shares began trading on the American Stock Exchange.

A key aspect of company growth commenced in the 1960s with a shift in business alignment that included creating components using Rogers materials as a base. Innovations in circuit boards made Rogers a favorite of the fledging computer industry, while insulation board maintained its reputation as the go-to product in the electrical power industry.







Left: Rogers breaks ground on its first manufacturing facility in Chandler, AZ, 1967.

Left, bottom: PORON® product sample used in trade show in 2000s.



The company also began investing heavily in research and development, which led to international expansion. In 1969 Rogers established MEKTRON N.V., a subsidiary in Ghent, Belgium, Rogers Mexicana in Agua Prieta, Mexico and a partnership with Japan's Nippon Oil Seal Industry Company, Ltd., to form Nippon MEKTRON, Ltd. to sell computer circuitry in Asia.

Growth continued in the 1970s. It was the era of PORON®, a foam material that quickly became an essential cushioning foam material for absorbent linings and soles for athletic shoes, ski boots and skates and later, in sports equipment such as ski racing poles, knee and elbow pads and football helmets. Industrial developments exploited the cushioning and shock absorption properties for the transportation and printing industries.

In the slow economy of the 1980s, Rogers vowed to work harder and smarter by cutting bureaucracy and streamlining the organization. It also turned with renewed focus to customer service, using a novel new marketing technique called "telemarketing" to reach out to the most promising sources of business. Computers were well on their way to revolutionizing every aspect of life, and Rogers was at the forefront with materials that could be relied upon to deliver. The company also began seriously looking at the potential of electroluminescent lighting for illuminating dials and displays in watches, clocks, medical equipment, sporting goods and electronics. Through both trials and triumphs, Rogers kept asking questions, researching and innovating as a way to continue "making innovation real."

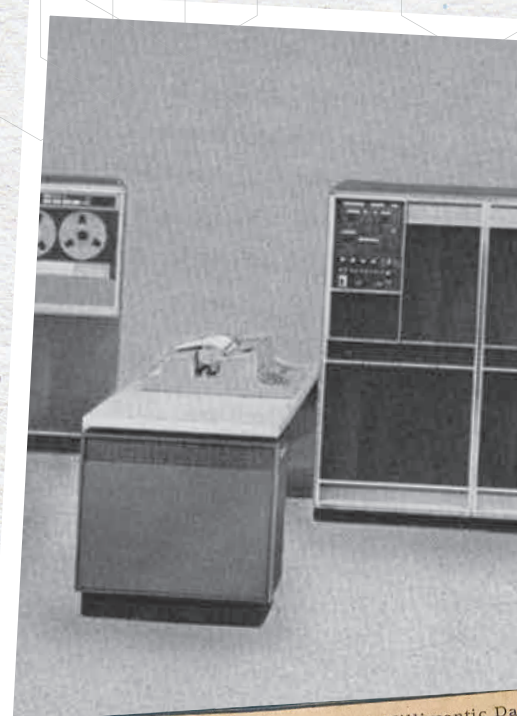


# 1959

Rogers acquires the patent rights from the United Shoe Machinery Corporation for a micro-porous polyvinyl chloride breathable plastic developed for shoe insoles. Soon after, Rogers begins selling the new materials under the trade name PORON®.

Rogers develops circuitry needed in IBM's first commercial transistorized computer, the IBM 1401, an engineering solution for the problem of power distribution that the computer had experienced early on. By the 1960s, virtually all manufacturers of mainframe computers are Rogers customers, cementing the company's role in the Information Age.

Sales reach \$5 million. With several new product lines, transformer board now accounts for nearly half of company sales. Rogers embarks on an ambitious marketing campaign to double sales every five years.



August 5, 1966 - Willimantic Da

## Here's the Willimantic D of ROGERS CORPORATION

Makes automotive engineers see Willimantic this way

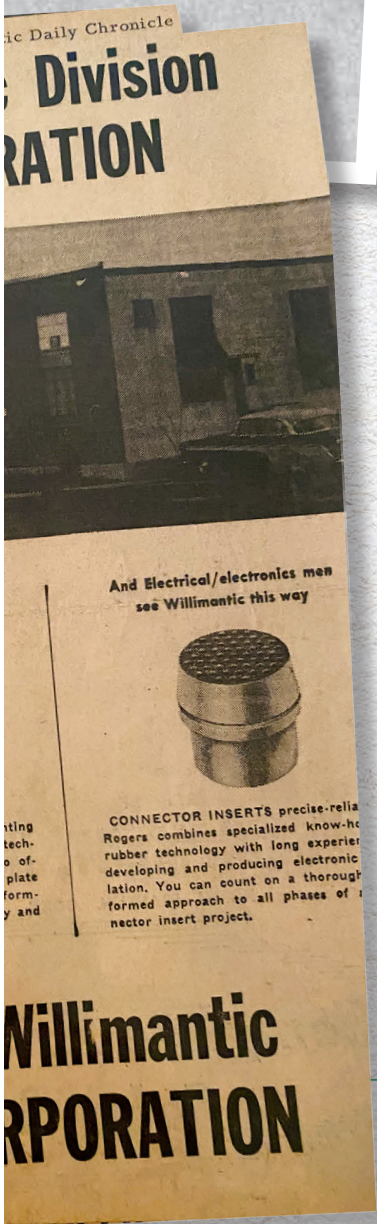
And printers across the country see Willimantic this way

FLOATS any shape — any size. NITROPHYL, which is an expanded, closed-cell, oil and gasoline resistant hard rubber, has been widely accepted as the standard material for automotive carburetor and gas tank components. Rogers has pioneered material under the trade name "NITROPHYL."

MOULDING of R/flex rubber printing plates. Continuous research in process techniques and controls enables Rogers to offer the printing industry a rubber plate material consistent in quality and uniformity. R/flex rubber plates lend a clarity and sparkle to every impression.

## and here's how Willimantic sees ROGERS CORPORATION





Rogers introduces diallyl phthalate (DAP) molding materials. DAP plastics expand the company's market to include electronic connectors for the computer and telecommunications industries.

Willimantic Division produces new Nitrophyl® closed-cell floats for use in carburetors and similar applications. The division also produces various rubber products such as gaskets, bearing seals and grommets, and corners the market on carburetor floats.

# 1960

Rogers Corporation is listed on the American Stock Exchange.

Top: IBM 1401 computer circa 1960.

Left: Rogers advertising the Willimantic Division in the *Willimantic Daily Chronicle* August, 1966.

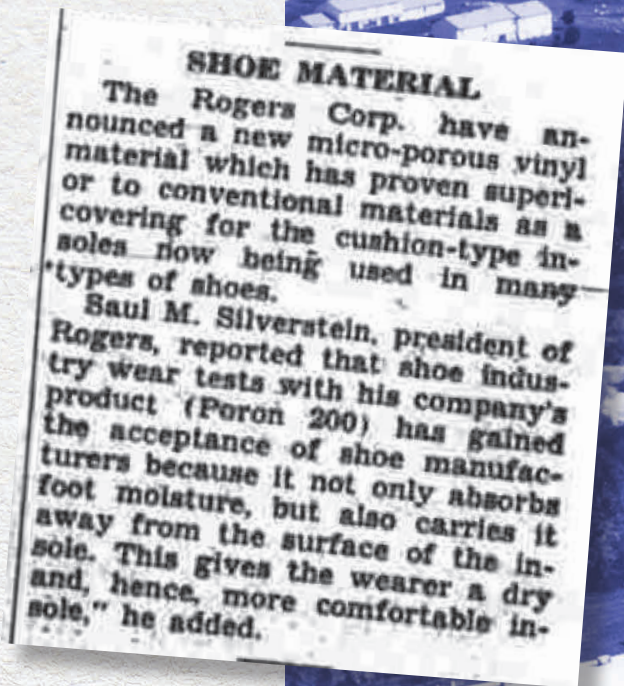
Right: Facade of the American Stock Exchange Building.





# 1962

Rogers installs the latest machinery to produce huge sheets of electrical insulation for the transformer board product line. Named "Paul Bunyan" in a companywide contest, it is the largest machine of its kind in the world. Connecticut Governor John N. Dempsey visits to unveil the machine, noting in his speech that because of Rogers Corporation, Eastern Connecticut "could and should be considered the nation's center for the manufacture of electrical insulation."



Above: Rogers introduces PORON® 200, a new cushion-type material for shoe insoles. Article from the June 23, 1962, *Manchester Evening Herald*.

# 1963

Sales rise to \$10 million as the company expands its existing two product lines to eleven.

The company builds a 35,000-square foot addition to the Rogers, Connecticut, plant.

Rogers forms an association with Balamundi in the Netherlands for marketing PORON® products.



Above: Aerial of Rogers, CT, plant in 1963.





1964

Rogers forms association with Merco Rubber Products to distribute Nitrophyl® floats in Australia and New Zealand, and with VDO Tachometer Werke in Germany, to market Nitrophyl® floats in Europe.



# 1965

Rogers supports the entire auto industry, as every major carburetor manufacturer in the U.S. uses a Rogers Nitrophyll® float in at least one model.

# 1966

Rogers purchases proprietary technology from Westinghouse Electric Corporation. By tweaking sophisticated circuitry, the company later develops flexible circuits and busbars that distribute voltage to circuit boards used in computers, telecommunications and other electronics applications.

Norman L. Greenman becomes President. He was instrumental in creating Rogers' five-year strategy in the late 1950s and a champion of diversification and expansion.

## Rogers is Firm maintains tradition

Editor's note: Rogers Corp., Killingly-based international manufacturing concern, began in Manchester in 1832. The company now has four plants in Connecticut, and nine more elsewhere in the U.S. and abroad. On Sept. 11 the Connecticut plant, including the one on F Street in Manchester, will sponsor open houses to celebrate the company's 150th anniversary. To publicize the event, company officials invited Manchester Herald Reporter Raymond DeMeo and photographer Tarquinio to tour the Manches



Dear Rogers I

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ponents that ent

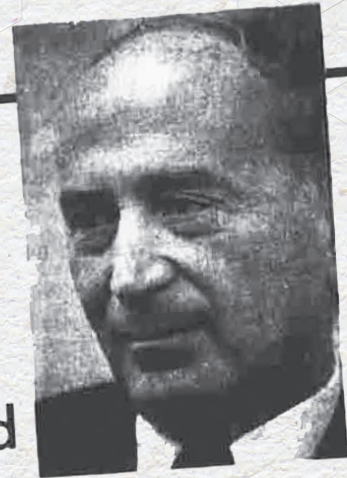
1. Employees
  2. Stockholders
  3. Customers
  4. Suppliers
  5. The Community
- must live

I accept the  
position and will



"High tech electronics is the industry of the future.  
That's where we're placing our bets."

Norman L. Greenman,  
Rogers Corp. president



150

on of changing products to meet demand

In 1960 the com-

the company's markets have suf-  
fered badly during the current  
slump. The automobile

ture: "The textile business  
doesn't seem to be going  
anywhere," says Greenman.

Meanwhile, Rogers has sunk  
of dollars" into capital

ment is 2,300, in plants spread  
over five states and three Euro-  
pean countries. Greenman says  
he favors scattered sites over  
large, consolidated operations.  
"A small operation provides a  
better environment for people,"  
he says.

Rogers Corporation has seen  
its share of changes in its first  
150 years. Chances are it will see  
a lot more. Says Greenman: "It's  
the new products, the new  
markets, that keep it going for  
us."

ROGERS CORPORATION | ROGERS, CONNECTICUT 06263

April 4, 1966

rs Employees:

of you have known me for all seventeen years that I have worked  
others have had a good deal of contact with me over many of  
s and some, particularly among our newer employees, have had  
dealings with me.

on occasion of my becoming president of your company, I thought  
ay a few words about where I believe the company is heading  
more important, about my philosophy of human relations.

committed to Rogers' continuing to be a growth company with  
for people to grow with it. The company will get bigger in  
sure all employees, insofar as possible, that we can offer  
well as opportunity to those who work here.

same time, we must be careful to retain those human values  
een so carefully built up over many years. While this be-  
asingly difficult as the company gets larger, I am confident  
maintain and even improve the atmosphere we have, because  
and because we will work at it.

you are aware of my deep commitment to development of the  
hrough training and education. Our programs in this area  
ngthened and intensified.

continue our policy of fair treatment, to the very best of  
for all employees.

we must all realize that, if our company is to be success-  
long pull, there must be equitable treatment of all com-  
enter into the business:

- ees - who create the values.
- olders - who supply the capital.
- ers - without whom there would be no business.
- ers - who provide the essential materials and services.
- mmunity - where both the company and the people in it  
ive.

the challenge and responsibility inherent in my new  
ill count on your help to see that the job gets done.

Sincerely,

Above: From an article about  
Rogers' 150th anniversary  
in the August 21, 1982,  
*Manchester Herald*.

Left: Letter to Rogers  
employees from Norman  
Greenman as their new  
President, April, 1966.



# Norman L. Greenman

(1966-1992)

Norman L. "Norm" Greenman was a visionary, a creative and a capable engineer with a knack for recognizing potential in both products and people.

"I find numbers to be the bane of long-range planning," he once said in a June 9, 1980, *Electronic Engineering Times* article. "People get so fascinated with numbers that they forget the plan is supposed to deal with strategic concepts."

Right: Trade publication article describing Rogers Corporation's "strenuous effort to diversify" as the company branches out with fibers and polymers.



Rogers' Greenman (right) outlines company's goals

## Branching Out with F

Antennae windows for missile nose cones, molded printed circuits, jet-engine heat shields, electrical insulation, liquid-level floats, and shoe insoles don't appear to have much in common. To Rogers Corp. (Rogers, Conn.), however, they have this in common: they are all products of the company's strenuous effort to diversify, and they've been made possible by the company's quick capitalization on new chemical raw materials.

Rogers came out of World War II almost completely dependent upon the electrical field, for which it is the country's top insulation board supplier. By parlaying its long (128

combining fibers and polymers as the company entered the field, it has become a major converter of Fiberloy fibers into products. Fiberloy fibers are made by combining chemical fibers with other materials do not have the strength of modern technology. A specific example of this is the reinforcement of antennae windows (for missile nose cones), which shield heat of ablation from electrical signals. Fiber-polymers are used in circuits used in computers. Another



*Norman L. Greenman*



**N. L. GREENMAN 32-7**  
Planning Manager

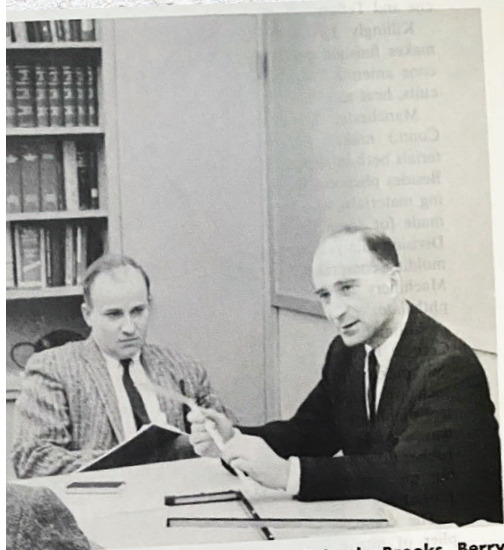
Above: Norman L. Greenman, from the 1955 Annual Report.

Norman L. Greenman grew up in Massachusetts and enrolled at MIT in 1940, but his college career was interrupted by World War II. He served three years in the Army, including eighteen months in the European Theater of Operations with the Army combat engineers. After the war, Norm taught physics briefly at the Biarritz American University in France before returning home to complete his bachelor's and master's degrees in chemical engineering. In 1948, Norm started work at Rogers as a Development Engineer. In those days Rogers was still a small company, and Norm had opportunities to move around in various positions: Technical Director, Vice President of Marketing, Vice President of Operations, Executive Vice President and, in 1966, to President.

"Norm had a vision of what he expected Rogers to become," remembers Harry Birkenruth, a former President of Rogers. "He was an excellent leader with outstanding technical and general knowledge and most importantly, he had the desire, drive and work habits to build a rapidly growing business. He wanted to build a great company without compromising basic, sound standards of integrity, individual self-worth and personal family life."

Norm was a pioneer of the microwave materials, busbar and flexible circuit industries, and held several patents in materials technology. As President of Rogers, he helped establish several multinational and domestic joint ventures. He was instrumental in transforming Rogers from a small paper products company to a much larger high-technology company that manufactured polymer-based materials and diverse components for the electronics industry.

Norm was well-liked among employees, who respected his leadership. "Norm was an absolutely wonderful person who could always see something unique in a material that no one else could," remembers Aarno Hassell, Vice President of Market and Venture Development. "He was a visionary and a hard worker. We wouldn't be where we are today without Norm."



Goals to department managers Spiwak, Brooks, Berry.

## Fibers and Polymers

ers and polymers. Or, any enthusiastically puts come "creator and conberloys, nonmetallic ally combining fibers and r use where conventional not meet the demands echnology."  
example of how the com- bined fibers and poly- reinforced-Teflon anten- (for the Atlas and other hich stands up under the ation but is transparent to signals. Another use of ers is the molded multilayer ed in the modular system Another: piston rings that temperatures up to 600 F.

verters, Killingly and Willimantic divisions.

Rogers and Killingly are both in Rogers, Conn., in a textile plant that Rogers bought from Goodyear in '35 when that company moved its textile operation south. Rogers supplies raw materials, of fiber-elastomer or fiber-plastics combinations (called Duroids), which are used in gaskets and electrical insulation. There are about 20 of these combinations at present. Rogers also makes another raw material, Poron, which is a microporous vinyl chloride, described by Rogers as a "breathable" plastic.

The company started producing the material in Aug. '60, having bought the rights to it from United Shoe Machinery Corp. Although the placement for



# 1966

Chevrolet introduces the Camaro which includes floats made from Rogers materials.

June 6, 1961

N. L. GREENMAN ET AL  
 METHOD OF MAKING A PRINTED CIRCUIT  
 Filed Feb. 6, 1957

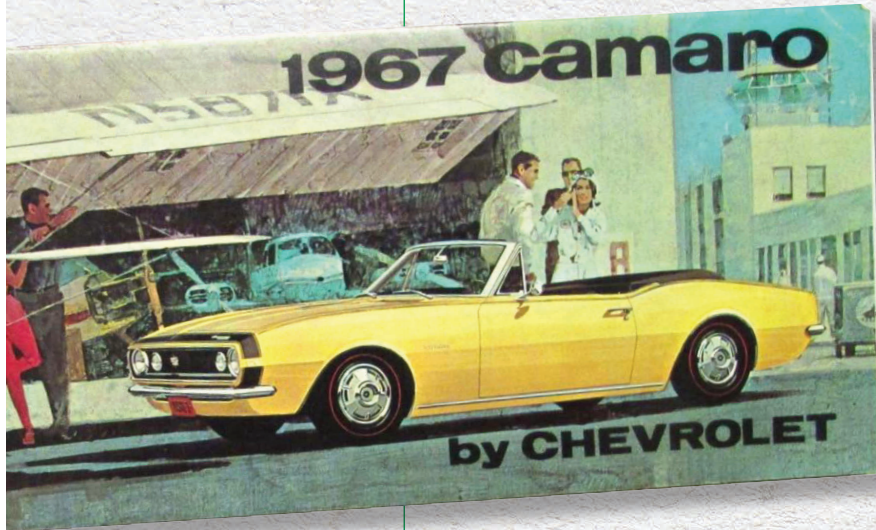


FIG. 1

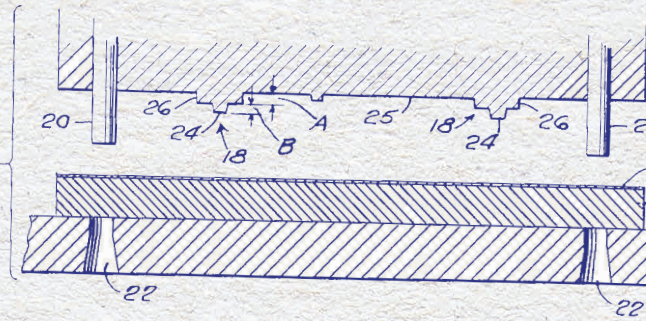


FIG. 2

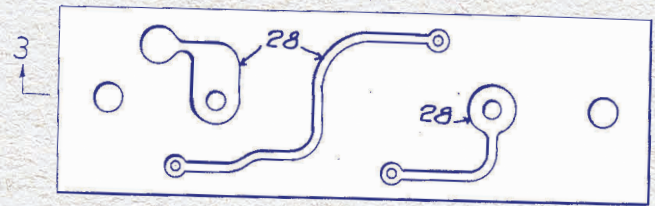


FIG. 3

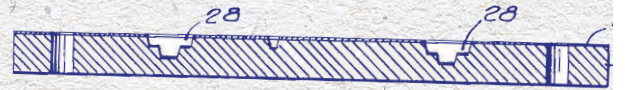


FIG. 4

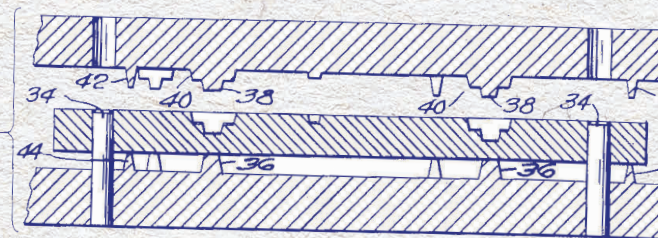


FIG. 5

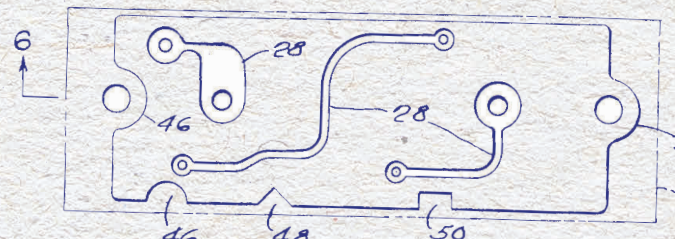
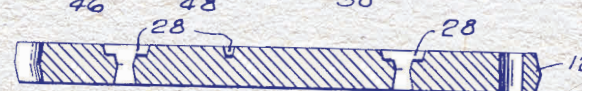


FIG. 6



Rogers builds a 10,000-square-foot addition onto the Rogers, Connecticut, facility.

Shareholders vote for a stock split following the Westinghouse agreement.

Above: 1967 Chevrolet Camaro promotional brochure. Courtesy of private collection.

Right: Diagram from patent application filed in 1957 for method of making a printed circuit.

INVENTOR  
 Norman L. Greenman  
 John L. Greenman  
 Paul L. Greenman  
 BY Robert R. Greenman  
 ATTORNEY



# 1967

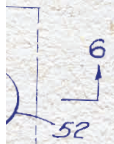
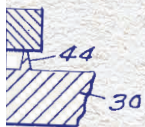
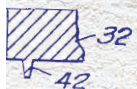
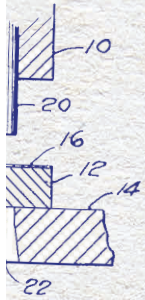
2,986,804

Rogers Corporation opens the Circuit Systems Division plant in Chandler, Arizona, the company's first outside Connecticut and where the technology purchased from Westinghouse is developed. The new \$1 million, 40,000-square-foot plant (employing 200 people) becomes operational headquarters for the West, where the electronics industry is growing rapidly. As the first to produce electronic circuitry of this kind in the West, the plant manufactures Mektron interconnection products such as flexible printed circuits, laminar power distribution busbars, R/flex flexible circuits, Dataflex keyboards, Mini/Bus busbars, Quik/Bus busbars, Q/Pac power distribution elements, Strip/Bus, wrap/Bus and RT/Duroid® microwave insulation.

Rogers acquires a 35,000-square-foot Woodstock, Connecticut, plant to house PORON® shoe and printing materials operations. The plant continues to manufacture PORON® at the Woodstock plant to this day.

Far Left: Article from the *The Arizona Republic* reports on Rogers Corporation's construction of Chandler, AZ, plant.

Left: Article from *Windham County Transcript* describing Woodstock plant purchase for PORON®, 1967.



INVENTORS  
John L. Greenman  
John A. Zagusta  
Paul L. Anderson  
R. Churchill  
ATTORNEY

**THE ARIZONA REPUBLIC**  
**Finance**  
Phoenix, Fri., Jan. 13, 1967

**The State's Business**  
**Chandler Chosen For Compatibility**  
By DON G. CAMPBELL  
Business and Financial Editor

EVERYBODY "wants a girl just like the girl who married dear old dad"—except, of course, in extreme cases momism.


The interesting question arises, though, if this same hunt for the old and familiar doesn't also apply on the industry front when a manufacturing firm wooed by thousands of employment-hungry cities and towns — goes hunting for a new plant site.

From a cold-blooded, business standpoint, of course, literally thousands of considerations must be taken into account in the serious business of weighing the virtues of one town against the virtues of another. But to what extent does the inclination to choose the familiar enter into all this?

Despite conscientious objectivity, there is more than passing evidence that Rogers Corp. of Rogers, Conn., was decidedly influenced in this respect when it elected to build a \$1 million electronics plant at Chandler, southeast of Phoenix.

Ground for the plant, which will employ about 200 workers initially, was broken yesterday and the background of Rogers' search for a plant site, and the events leading to its selection of Chandler, are an interesting case study in the factors that go into the choosing of a plant site.

It is particularly interesting, too, since Rogers, with annual sales of \$13.3 million and approximately 800 workers in three other plants, has never before ventured out of the state of Connecticut and its



**Huge Plant Purchased For PORON**  
12-29-67

WOODSTOCK (Special) — Norman L. Greenman, President of Rogers Corp., has announced the purchase of a 35,000 square-foot plant in Woodstock to handle increasing demand for PORON materials.

The 22-acre site was owned by C.F. Kirk Laboratories of New York City and operated by Production of Pharmaceuticals, Subsidiary, Inc.

Acquisition of the building will give Rogers Corp. four plant locations in Connecticut - Windham, Manchester, Rogers and Woodstock.

The company will occupy the



# 1967

Servtex Corporation is organized as a wholly-owned Rogers subsidiary in Sanford, North Carolina, to produce engineered polymer replacement parts for the textile equipment industry.

# 1969

Mektron N.V. opens in Ghent, Belgium as Rogers' first overseas manufacturing operation—yet another example of Rogers' commitment to being close to customers. This wholly-owned subsidiary produces busbars and interconnection products for the European electronics industry, later expanding to include Mektron Circuit Systems, Ltd. of Great Britain, Mektron France SARL and Mektron CmbH of Italy.

Rogers forms an association with two English companies to market products throughout Europe: BXL Plastics Materials Group for RX phenolic molding materials and EA Chamberlain for GP/Duriods.

## ROGERS CORE BELIEFS

## DEFINING WHO WE ARE AS ROGERS EMPLOYEES

### Safety

We have a clear responsibility to protect our coworkers, our community, and ourselves by making health, safety, and environmental issues the primary consideration in everything we do.

### Customer First

We are committed to keeping our customers satisfied by understanding their needs and by meeting or exceeding their expectations, thereby earning their trust and loyalty.

### Shareholder Value

We inspire shareholder confidence by always striving to increase the value of their investment in our company – measuring success by our stock and a growing investor base.

### Teamwork

We reach our goals collectively by sharing ideas and exchanging information openly and willingly in an environment that celebrates achievement, innovation, and participation at all levels.

### Dignity & Respect

We treat others with dignity and respect, and will value their ideas, provide honest feedback, and foster individual growth in a workforce of diversity.

### Continuous Improvement

We will continuously strive to do better than before in all aspects of our business by imagining what is possible and making it happen through study, measurement, and improved results.

### Corporate Citizenship

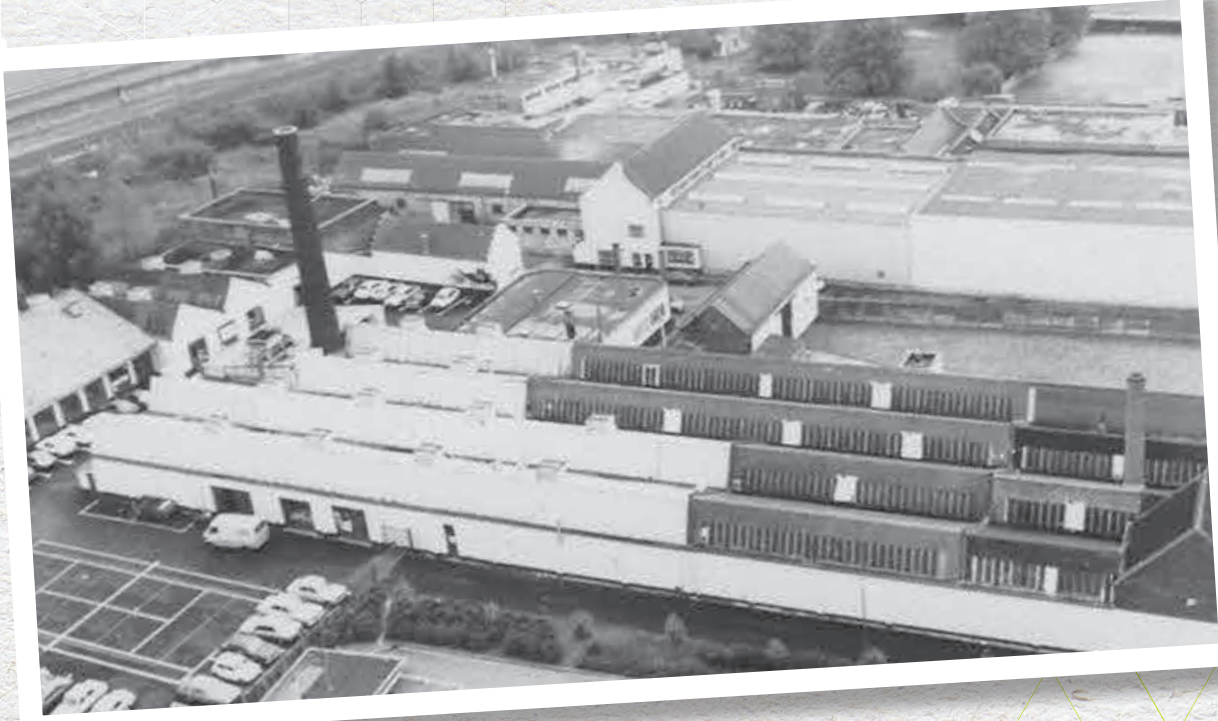
We will have a positive effect in the communities in which we live and work around the world by being a good corporate citizen.

### Uncompromising Integrity

We will always adhere to the highest standards of ethical conduct by complying with all laws and regulations, honoring our commitments, and exercising fairness and honesty in all business practices.

Rogers licenses with Nippon Oil Seal Industry Co., Ltd. to manufacture and sell Mektron interconnection products in Japan. The company organizes their subsidiary, Nippon Mektron Company, Ltd., to exploit electronic interconnection technology.





Above: Meksron N.V. opens in Ghent, Belgium as Rogers' first overseas manufacturing operation.

Rogers Mexicana S.A. (or Romex) opens in Agua Prieta, Mexico. As a satellite operation of the Circuit Systems Division, Romex performs assembly and finishing work on Meksron interconnection products

# 1970

The data processing industry is the largest single market for Rogers products.

Rogers opens the multi-million dollar Joseph M. Lurie Research Center, named after the company's former technical director. The facility is a world-class Research & Development facility with a documented history of creating materials solutions.

Above Left: Throughout its history, Rogers has looked to its company values as guidance.



# The Lurie Research & Development Center

It was only fitting that the company name its world-class Research & Development facility after Joseph M. Lurie, an innovative Technical Director at Rogers who not only held patents in textile and paper fields, but was also an inventor and accomplished writer with several economic papers published by a congressional subcommittee.

At the time of its opening in 1970, the multimillion-dollar Lurie Research & Development Center staffed 55 people, predominately chemists and chemical engineers who provided technical support to the company's various divisions and conducted research in areas not yet exploited commercially. Laboratory equipment included a scanning electronic microscope, 21,000-pound capacity Instron universal tester with environmental chamber, infrared spectrophotometer, dynamic mechanical spectron, custom microwave test equipment, mechanical analysis equipment and various thermal analyzers. The Center also housed polymer processing equipment including molding presses, roll mills, miniature papermaking machines, coating equipment and various kinds of mixers and blenders. It also housed 2,000 books, technical papers and business journals, American and foreign patent reference dictionaries and corporate literature.



With close ties to MIT, the University of Connecticut, Worcester Polytechnic Institute, University of Delaware and University of Detroit, the Center continues to play an active part in supporting engineering and science projects in higher education. Rogers was the first industrial corporation to sponsor the Industry



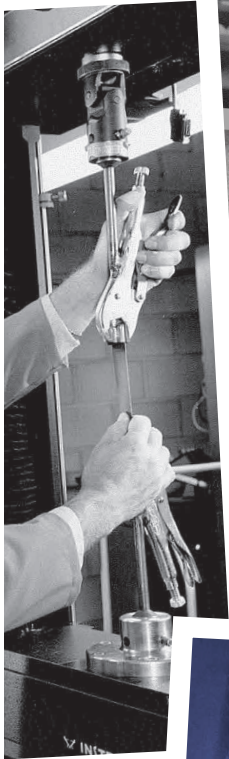




Left: Lurie R&D Center employees.

Polymer Processing Program at MIT and was a charter member of the University of Connecticut's Institute of Materials Science Associates Program. Additionally, Rogers sponsored the University of Delaware's Center for Composite Materials Research and participated in WPI's extensive student projects program.

The Lurie Center underscores Rogers' commitment to Research and Development and continues to provide technical support to the company's various divisions while also conducting research on new products. Laboratory instrumentation includes sophisticated equipment for examining the structure and characteristics of materials and components as well as pilot plants designed to simulate conditions encountered in actual production of products.





# 1970

Rogers enters the Asian market through a joint venture with Nippon Oil Seal Company of Japan, a Rogers licensee in the circuit field. The two companies open a 52,000 square-foot plant in Ushiku, 30 miles from downtown Tokyo, to manufacture Mektron electronic circuit systems for Japanese computer and communication customers. It is one of the fastest-growing of all international markets.



Above: From Nippon Mektron grand opening in 1970 with Aarno A. Hassell, Vice President, Market and Venture Development on right.

Rogers introduces engineered materials for printed circuit boards in microwave applications. Production of these materials requires a dielectric “paper” and uses existing paper manufacturing equipment, thus building upon Rogers’ expertise in the paper industry. With specially designed dielectric properties, these materials are ideal for military electronics, commercial aircraft navigational aids, antenna patterns, radio frequency processing, space missions and communications.





Above: Women working in Rogers' Lab Production at the Lurie Research & Development Center circa 1970.

# 1973

Rogers develops R/flex flexible circuit materials for company use and for sale to customers. These materials are used to make flexible circuits for telephones, automobiles, cameras and a wide variety of other applications.

Sales reach \$43 million, doubling in five years over the \$20 million sales volume of 1968.



# A Time of European Expansion

MEKTRON N.V. Ghent, Gasmeterlaan opens

New RT/Duroid® building opens in Mesa, Arizona

Market BMU resale in Ghent, Belgium

MEKTRON France opens for Minibus/ Membrane keyboard manufacturing

End of IBM mainframe computer business, start of mass transit business

1969

1972

1978

1987

1993

1996

1971

1973

1984

1992

1995

Open sales offices in France, UK and Germany

MEKTRON N.V. opens new office in Ghent, Belgium  
Start of IBM mainframe computer business

N.S. marketing PMU and MMD resale in Ghent, Belgium

MEKTRON N.V. building destroyed in fire, moves to Afrikalaan

MEKTRON N.V. closes sales offices in France, UK and Germany





Opens RO4000®  
microwave plant  
in Ghent, Belgium

Receives award for  
IBM data storage

Opens PES/ROLINX®  
in Hungary

EVERGEM microwave  
building opens in  
Ghent, Belgium

Acquires curamik®  
electronics GmbH,  
company is awarded  
TESLA Model S  
business

Moves PES/  
ROLINX®  
manufacturing  
and warehouse  
to EVERGEM  
campus

1998

2001

2007

2011

2016

2018

1997

1999

2002

2008

2013

2017

Acquires  
INDUFLEX N.V.

RO4000® treater  
opens in EVERGEM

Opens PES/curamik®  
in Hungary

NOKIA base station  
business begins

Rogers BVBA; divests of  
Rogers INDUFLEX N.V.

Moves Rogers BVBA to  
EVERGEM campus; sells  
Afrikalaan building to  
Christeys



# 1975

Rogers purchases its subsidiary, Bemol® Corporation.



# 1976

The Rogers, Connecticut bell rings at noon on July 4 as part of a nationwide celebration of the U.S. Bicentennial. Historic bell #773 was cast in 1860 by Frederic Fuller of Providence, Rhode Island, for the Williamsville Manufacturing Company. Originally, the bell rang to summon Quinebaug Valley workers to work, signal fires and announce celebrations. On April 18, 2000, Walt Boomer, then Rogers' president, rang the opening bell on the New York Stock exchange to celebrate Rogers' listing on the NYSE. Now located at Rogers' headquarters, the Rogers bell rang out at the same time, in celebration of the event.

The company enters a licensing arrangement between Otalite Co., Ltd., and Nippon Oil Seals Industry Co., Ltd.

Rogers employee Warren T. Taylor, the "Father of Flexo," who made considerable contributions to flexographic printing technology, is inducted into the Flexographic Technical Association (FTA) Hall of Fame. An FTA board trustee from 1976-80, Taylor also served as FTA's 1978 President and helped oversee the dedication of the organization's new headquarters in Huntington Station, New York. The FTA still provides a scholarship in Taylor's name.

Rogers acquires a plant in Lithonia, Georgia, to house the new HPP products and mechanically produced circuit operations.





# 1977

The Molding Materials Division builds a 50,000-square-foot addition to accommodate product expansion.

Rogers builds the Engineered Products Division plant in Lithonia, Georgia, near Atlanta, a sister to the Willimantic division, where Rogers' new Envex products and molded and die-stamped circuits are manufactured.



Above: The Rogers, Connecticut bell #773 was cast in 1860.

# 1978

Flexible circuit keyboards are introduced with a novel electronic packaging technique, the first time the technique is applied in the keyboard industry.

The Manchester, Connecticut facility expands to accommodate the acquisition of Acme Resin's diallyl phthalate (DAP) molding materials business, giving Rogers the largest capacity in the industry for producing high-performance plastic molding materials.



# A Timeline of Products

(1959-91)

1959

**PORON®** polyvinyl chloride (PVC), a breathable "leather substitute" to replace leather insoles in shoes

1960

To fulfill IBM's need for laminate power distribution busbars for computers, Rogers develops a family of products to transmit and distribute electrical signals in electronic equipment and for switching in electrical controls. These **Mektron** circuits, first developed in 1956, are used in switches and timers in appliances, automobiles and other industrial applications, including the lucrative computer field. The Mektron line expands with Mini/Bus power distribution busbars for printed circuit boards in 1969, mechanically produced die-stamped circuits in 1976 and flexible circuit Q/pac® power distribution elements (combining functions of Mini/Bus units and ceramic capacitors) in 1978. It is the forerunner to the busbar and ceramic substrate materials innovating next-generation and new platform versions.

**R/plate** breathable, durable printing surface made of PORON® for printing plate materials

1962

1973

**R/flex®** flexible circuit materials for telephones, automobiles, cameras and in a wide variety of other applications

1976

**PORON® 4000** high-density, highly breathable cellular urethane material for sports shoes, cushioned insoles and industrial applications such as produce protection, material handling, adhesive tapes, electronic keyboard assemblies and backing for printing plates

**ENVEX®** and **Feurlon®** high performance polymer (HPP) products for use as bearings and other critical components in extreme environments of friction, high temperature and chemical corrosion





1977

**R/flex® 2400** lower-cost solderable material for flexible circuits

1979

**Q/Pac®** high capacitance power distribution element combining power distribution properties of Mini/Bus for printed circuit boards with capacitance (the ability to store electricity) to produce a powerful second-generation electronic device

**Endur®** engineered elastomer components for business machines, with greater reliability, longer life and design as compared to conventional rubber feed rollers, guide rollers, bearings, drive belts and critical components for photocopiers, word processors and other business machines

1984

**Micro/Q®**  
decoupling capacitors



# 1979

Rogers receives the *Industrial Research Development* magazine's I-R 100 award for developing Q/Pac® high capacitance power distribution element, calling it "one of the top 100 new products introduced in 1979."



TOPICS ▾

TECHNOLOGY ▾

2021 R&D 100 AWARD WINNERS ▾

RESOURCES ▾

GLOBAL FUNDING FORECAST

Models QV-2 and QH-2 Q/Pac  
High Capacitance Power  
Distribution Element

Rogers Corp.

D. H. DeVries

Sales reach \$95 million, up 240% over 1969 sales. In 1958, 5% of the company's business was in electronics; by 1980, that market accounts for 65% of Rogers' sales.

Above: Rogers receives the *Industrial Research Development* magazine's I-R 100 award.

## A Look at Global Expansion

### 1948

Manchester, Connecticut  
Rogers, Connecticut

### 1980

Manchester, Connecticut  
Rogers, Connecticut  
Williamantic, Connecticut  
Woodstock, Connecticut  
Chandler, Arizona  
Mesa, Arizona  
Lithonia, Georgia  
Sanford, North Carolina  
San Diego, California  
Aqua Prieta, Mexico  
Ghent, Belgium  
Chateau Gontier, France  
Ushiku, Japan



# 1980

Rogers acquires a Mesa, Arizona plant and opens a new production facility in Chateau Gontier, France.

Rogers acquires Soladyne, Inc., in San Diego, California, a leading manufacturer of microwave stripline and microstrip circuits used in microwave equipment for military electronics.

*"It's the new products,  
the new markets, that  
keep it going for us."*

—Norman Greenman in  
150th anniversary paper





# 1981

Rogers and Nippon Mektron Company, Ltd., license Carl Freudenburg in West Germany to produce flexible circuits.

Rogers introduces "Total Quality Concept" (TQC) companywide to increase efficiency and quality for technology transfer between divisions. The program is designed to build an environment in which everyone participates and to encourage decision-making based on facts and statistics rather than emotions.

Rogers acquires Flex-Key Corporation, which uses electroluminescence (EL) to backlight military keyboards. The company recognizes the potential of EL and presses forward with development, especially after learning of the potential in the automotive market for lighting and display options.

Right: From Durel Harvard Business School Case Study, 1986.

Five years ago, we were not very dis-  
turing. R&D was right: manufacturing w  
During the last five years--pushed by di  
the TQC program--manufacturing has gained  
many of its problems. Now engineering ca  
the future. But if we don't bring staff  
into the TQC program, they may be left bel

R&D was pleased with the increased  
divisions. According to Berry:

The main effect of TQC on R&D has l  
provided a much more controlled environmen  
can be introduced. The divisions have gai  
of how products can vary while still under  
can form false impressions from inadequat  
Their sophistication will result in our d  
because we will provide a more complete pa  
wouldn't have been able to absorb it.

Greenman acknowledged the legitimacy  
technology transfer be governed by the principle

When R&D delivers a product to a divis  
to do it with a much deeper understanding o  
cations and process controls. We are just  
We thought we had it before, but we didn't.

Both Greenman and Berry recognized that TQC would b  
outside of manufacturing, but acknowledged that the  
it would take. Much R&D work, for example, was n  
therefore not well-suited to the application of sta  
same way that they were used in manufacturing.

### The EL Project

Rogers became interested in improving EL  
enhance the military keyboards made by its new acqu  
Corporation. At the time, EL was used to backlight  
research soon revealed a broader opportunity, and  
team was formed. (See Exhibit 1 for a description  
competitors, and products.) Marketing and R&D were  
team, but not manufacturing or a division, since EL  
existing division. The team first selected a screen  
the silkscreening of T-shirts or art prints, as th  
manufacturing. The person within Rogers with the  
expertise was Bill Harper, an experienced manufactu  
Arizona. Jeff Otto, an R&D product development man  
team, brought Harper to R&D to head up the EL work.

I admired Bill Harper. He's a very creat  
though not really a trained scientist. I don't  
who dislikes organization as much as he does, I



# What's our business?

Do we make products called Board,  
Extruded and Milled?

Or do we call our products Matrix,  
Phenolic and DAP?

Or how about the latest name for all our products:  
Engineering Thermosets?

Our real business is helping make  
new ideas possible, solving problems,  
providing long-term reliability.

Our materials can be molded into  
intricate shapes that will not change.

They are creep resistant and dimensionally stable,  
even at high temperatures and under heavy loads.

This is true whether they become a matrix mold  
for a fine definition printing plate,  
a commutator for a high speed electric motor,  
a transmission torque reactor, a disc brake piston,  
a coil bobbin, a switch housing,  
a critical connector in an airplane or computer  
or even a rocket nozzle.

Our materials are used for demanding  
applications like these because  
they do things other materials can't do.

They solve problems.

They help turn ideas into reality.

—From a 1981 *Rogers Reporter* newsletter.

disciplined in manufac-  
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ned the ability to solve  
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aff functions like R&D  
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acquisition, the Flex-Key  
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cturing engineer then in  
manager and head of the  
c. Otto recalled:

reative person,  
't know of anyone  
s, but he makes



# 1982

Rogers celebrates 150 years. With annual sales exceeding \$100 million, Rogers employs 2,500 people at 12 manufacturing plants in five states and three foreign countries. Rogers products can be found in diverse applications such as spacecraft, football helmets and household steam irons. More than 70 percent of its output is for the growing electronics industry.



We MMD people enjoy a unique distinction as we join other Rogers Corporation employees around the country in celebrating the company's Sesquicentennial. It was here in Manchester, in 1832, that Peter Rogers, a Dutch immigrant, founded the business that still bears his name. Furthermore, with our matrix board line, MMD makes a product which, though used for different purposes, can fairly be called a direct descendant of what Peter manufactured — specialty paper and paperboard products for the Manchester textile factories.

The company has, of course, come a long way — since Peter's time. Today, Rogers Corporation which sells more than 70 percent of its output to the growing electronics industry. With annual sales exceeding \$100 million, Rogers now employs over 2,500 people at 12 manufacturing plants in five states and three foreign countries. Use of Rogers products ranges from (and don't you love the pun) devices as space craft to

Left: Rogers Corporation newsletter in 1982 highlighting Rogers' 150-year history.



Left: Rogers Corporation celebrates 150 years, from 1832 to 1982.

Rogers acquires a new plant in Chandler, Arizona and consolidates Arizona operations. This is the present day Roosevelt plant.





Above and Below: The International Conference on Reinforced Thermosets (ICRX). Rogers Corporation hosted the event at the Berris Motor Inn & Restaurant in Danielson, CT in 1982. Representatives from Vynckier N.V. and Otalite Company, Ltd., both of whom have licensing agreements with Rogers, attend.



Above, Pictured on Left, Front row: Richard Brander, Rogers Marketing; Mr. Aso, President of Otalite; Robert De Smet, Vynckier. Back row: Ralph Wright, Rogers Marketing Manager Molding Materials; Bruce Fitts, Rogers Development Engineer.



# 1983

The Circuit Systems Division becomes the Interconnection Products Group with five divisions operating three plants in the Phoenix, Arizona area and two in Mexico, with over 250,000 square feet of plant space.



# The Importance of Process

Rogers product engineers not only want to know the characteristics of the materials they are working with, but also how they behave during operations such as extrusion, molding and grinding. This dual knowledge is critical because in the materials business, product and process are tightly linked. As a 1986 Rogers case study reported, "You can't separate the product from the process. Your process determines your design standards and guidelines. It shows you how to get there, not just where you want to go."

Rogers viewed its broad knowledge of polymer materials as a major competitive strength. Greenman, a former chemical engineer and president since 1966, stated:

Materials are our fundamental competency; they are the base upon which we build. When we look at a project, we first decide if we can add something special--something unique and new based on our materials competency. We try to come up with products where we have protection against low-cost producers; this is very important in international competition. Technology is our defense.

Rogers proprietary knowledge encompassed both materials and processes. Its product engineers needed to know not only the characteristics of materials, but also how they were likely to behave during operations such as extrusion, molding and grinding. This dual knowledge was critical because in the materials business, product and process were tightly linked. One division manager observed:

You can't separate the product from the process. Your process determines your design standards and guidelines. It shows you how to get there, not just where you want to go.

The design of a Rogers product therefore did not end with the specifications that it had to meet, for the specifications would be met only if materials were first processed in a particular way. Product development usually started from the properties desired in the end product and worked backwards to the process and starting materials. For example, if a product had problems with moisture penetration, engineers would select materials that had lower transmission rates and thus would be slower to conduct the moisture.

While the development of process and product were thus inseparable, reverse engineering of products did not immediately reveal the details or steps in the process used in manufacturing. While one could determine that a product had been laminated, for example, neither inspection nor analysis of the product would tell the temperatures, pounds of pressure, or length of time required for different processing steps. In this respect, the real product was the process.

Above: 1986 Rogers case study.



# 1984

Rogers Japan, Inc. (RJI) opens in Japan to support the company's electronics materials activities.

Rogers creates Rogers INOAC Corporation, a joint venture with INOAC Corporation in Nagoya, Japan to manufacture PORON® products in Asia.

The Rogers Research & Development division grows to 80 scientists and technicians who work, communicate and coordinate closely with management, marketing and customers. The team makes frequent visits to customers to determine needs and learn what customers want a product to do, how they plan to use it and how they expect to test it. They obtain and develop product information for customers and create new products or prototypes responsive to the needs.

*"In a slow economy, we must make our materials better. We must solve new problems, make new ideas possible, provide even longer term reliability. Our materials must be more uniform, more consistent, more cost-effective. We must update our processes, take advantage of new ideas, adapt to change and do a better job."*

—From a 1981 *Rogers Reporter* newsletter



## A Plastic Car Engine: "Rogers knows how to get things done."

In 1987, Rogers Research & Development team worked with Ford Motor Company and Polimotor Research to develop an internal combustion engine from polymeric composite materials or heavy-duty plastic.

According to Matty Holtzberg, President of Polimotor Research, "Phenolic is one of the most overlooked high-performance materials out there. The physical properties are incredible in terms of strength and toughness; the mechanical properties rival aluminum at operating temperatures. I think phenolics will be the cast iron of composites." Low cost and reduced production time are other benefits of using phenolic.

When a prototype was ready, Rogers entertained several Ford executives who flew in on a chartered plane to witness the performance of the Polimotor Model 234.

Remembers Dirk Baars, Director, Innovation Center West, the Research & Development Team "set up bleachers in the factory around a very large molding press. Barbara Olson, Technical Manager for our Molding Materials Division, operated the press during the demonstration and pulled the parts out of the mold to illustrate how lightweight they were in comparison to their metal counterparts."

While the Polimotor internal combustion engine was never commercialized, the project raised the automotive industry's confidence in the use of polymer composites in power train applications, leading to a number of other applications such as engine intake manifolds, fuel rails, self-lubricated thrust washers and water pump components.

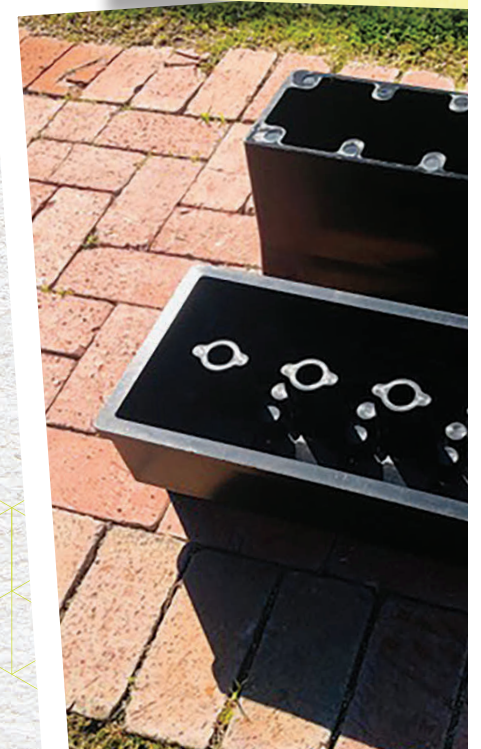
"If you want to stay competitive," said Holtzberg, "you have to be constantly searching for new and better ideas ... and Rogers knows how to get things done."



### Intrigued By



Testing phenolic ti  
ties at Rogers usin  
tem.





# 1988

One of the most popular products on the market is the Timex Indiglo Watch with a face that is illuminated by "Indiglo" lamps, supplied by DUREL®. The lamps emit a bright green glow, making them ideal for lighting up watches, car dashboard gauges and personal pager displays.



Above: Timex Indiglo watchface circa 1990.

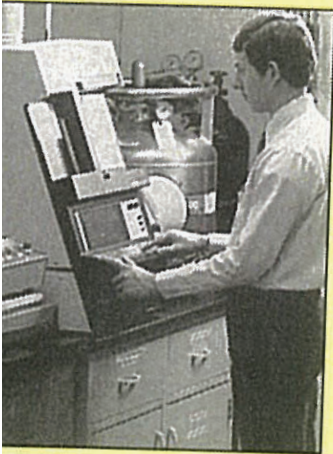
Top: *Automotive Industries* magazine article discussing Polimotor research and plastic car engine.

Middle: Bruce Fitts tests an engine. From *Automotive Industries* magazine article.

Left: A Polimotor Model 234 from an internal combustion engine made in the press at the Manchester, CT plant from polymeric composite materials circa 1987. *Courtesy of Dirk Baars.*



## By An Engine



... thermal proper-  
... using DuPont sys-





## Chapter 5

# “Deciding What We Did Best”

(1991-2001)

## 1991

The company divests its Circuit Components Division.

The first combat use of the Patriot Missile occurs January 18 during the Gulf War. Rogers materials were used to create the missile’s sensitive antennas.

When the 1990s rolled around, Rogers Corporation found itself with a unique challenge. The company had deep knowledge in a variety of technical areas. Global expansion gave Rogers entry into worldwide markets. It had highly skilled teams who were curious and open to new ideas. The problem was, Rogers had moved away from its core purpose of creating superior materials to meet market needs and instead, found itself in the business of actually fabricating components. With so many different product lines being assembled, the company almost went bankrupt. It also learned an important business truth the hard way—you can’t be good at everything.

Enter Harry Birkenruth. Having worked at Rogers almost his entire career, Harry was named President and CEO and charged by the Board to refocus the company on what it did best: specialty materials. To concentrate more fully on its best performing operations, Rogers divested several business segments from 1992 to 1994 and its Soladyne subsidiary in 1995. Internal operations were also assessed, resulting in streamlined processes and unwelcomed layoffs to trim the workforce. These moves helped turn the ship, as overall sales soared to \$173 million by mid-decade, positioning the company for an even more important role in the new millennium.

Of particular promise was the company’s DUREL® products, which solved illumination problems in a number of markets. The lamps could fit into many automotive applications, information display applications and other consumer products.

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# Rogers Corp.'s Harry Birkenruth: Turning Around Company By Deciding What It's Best At

By Matt Kraatz  
*Investor's Business Daily*

With a flick of his left wrist, Harry Birkenruth can prove that he and his team turned Rogers Corp. around.

Normally concealed by his shirt cuff a plastic Timex jogger's watch. At a glance, it seems an unglamorous piece for the head of a growing 4-million polymer manufacturer.

That is the reason for his selection? The watch's face is illuminated by "ligio" lamps, supplied by Durel Corp., a joint venture formed by Rogers and IM Co. in 1988.

The watch means a great deal for Birkenruth said, pulling up his sleeve. "These lamps have potential for sales of them have already grown

a great deal."

He's right. These lamps, which emit a bright green glow, are already appearing in car dashboard gauges and personal pager displays.

And as just one of Rogers' growing and profitable units, Durel symbolizes the success of Birkenruth's restructuring plan.

Since being named president and chief executive of the company in 1992, Rogers has reversed years of sliding earnings and market value. Rogers, based in Rogers, Conn., manufactures polymer materials for use in, among other



Harry Birkenruth

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## Birkenruth Built Two-Way Trust At Firm

From page 1

mine the overall direction of the restructured Rogers.

After choosing which businesses Rogers has excelled in, Birkenruth was able to select which units to sell and which to keep, including Durel.

The company believed luminescent lamp technology would appeal to many customers already using its polymer products.

"We knew that we performed well in joint ventures," Birkenruth said. "Our two companies had technology and market capability, which fit Durel's needs."

It's not the kind of turnaround investors typically expect from a "company man." Birkenruth has worked for Rogers since 1960, three years after receiving a business degree from Har-

through major change," Birkenruth said. "But at Rogers, we've done that with people that are here."

In the 32 years before being named president, Birkenruth served as chief financial officer, the head of the polymer products group, and executive vice president.

Most executives with a similar resume would be termed "entrenched." But Birkenruth says his tenure has given him perspective, not a bias for the past.

"Rogers had always promised great performance but had not delivered," Birkenruth said. "Our people knew it and they were worried."

He said that's why the repair of Rogers was better handled by an insider than by a turnaround artist brought in from the outside.

and fixes," Birkenruth said. "I've read about turnaround experts who gather everybody in the morning and tell them everything will be changed that afternoon."

"A slash-and-burn approach that doesn't have the folks behind it will restructure the company, but it isn't going to be solid."

Birkenruth says that a company insider can have an outsiders' objectivity by concentrating on financial measure. He focuses on cash flow.

"Generating cash is what should be thought of for profitability, not so-called accounting flim-flam," he said. Rogers' cash flow from operations has more than doubled since 1992.

The company's 900 employees given more latitude to make decisions, Birkenruth said. They are governed

"Rogers had also promised great performance but had not delivered. Our people knew it and they were worried," Birkenruth said in a 1995 interview. Making hard decisions paid off. "The balanced growth we are achieving is unusual and gratifying," Birkenruth said. Selling off businesses that fell outside Rogers' traditional expertise came about "because we decided what we did best."

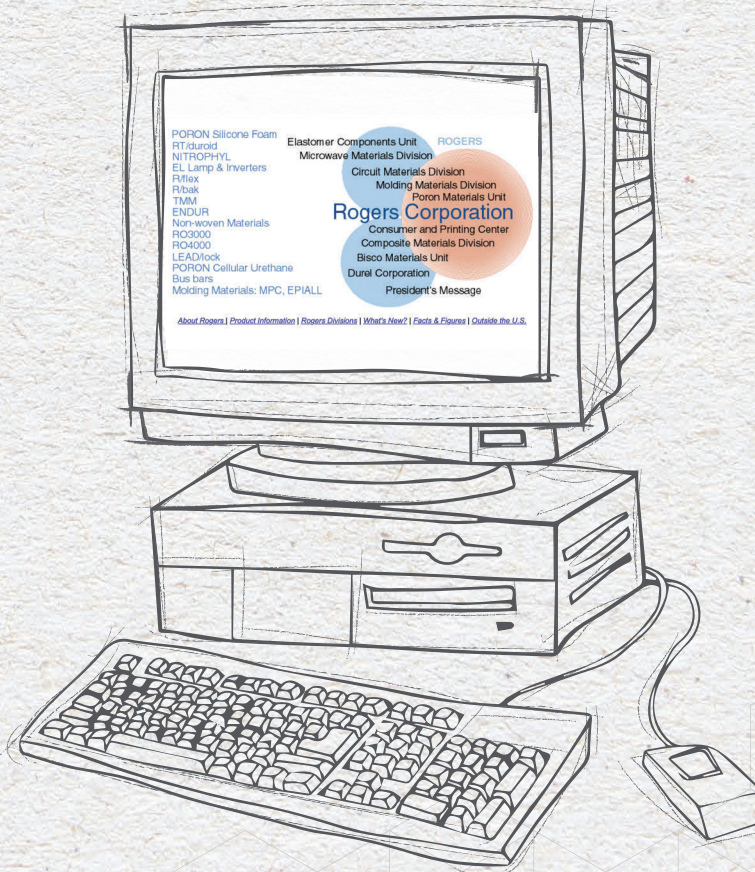
Above: Article from *Investor's Business Daily*, May 31, 1995.

## 1991

The World Wide Web debuts. Rogers debuts [www.rogers-corp.com](http://www.rogers-corp.com), its first website, in 1998.

## 1992

Harry Birkenruth is elected President and CEO. Norman L. Greenman becomes Chairman of the Board.





# Harry H. Birkenruth

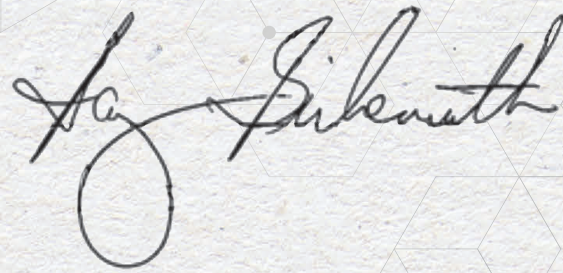
(1992-1997)

In 1959, Harry H. Birkenruth struck up a conversation with John Foley on a commuter train to New York City. Foley was an industrial psychologist recruiting for a small company called Rogers Corporation in Connecticut, and he asked Harry if he'd be interested in interviewing.

"I decided to go see him, and it ended up being a couple hours, and then he asked me to join him for a little supper before continuing," Harry remembers.

"Finally, after another hour or so, he asked me to take the trip up to Connecticut. I didn't mind going to the boonies to meet everyone, and it turned out that they offered me the job."





Above: Harry Birkenruth, from the 1995 Annual Report.

Born in a rural village in Germany in 1931, Harry H. Birkenruth fled Germany with his family in 1937 to escape Hitler's violence against Jews. The family settled in Brooklyn, New York, and Harry attended public school, graduating from Brooklyn Technical High School. He became a naturalized citizen in 1944 and earned a degree from City College of New York in 1953. After serving two years with the U.S. Army, he returned to school, this time to Harvard University to earn an MBA. He graduated in 1957 while simultaneously serving as First Lieutenant. He began work at Rogers in 1960 as Assistant Treasurer and worked his way through several leadership positions, eventually becoming President and CEO in 1991.

Harry became President during a trying time in Rogers' history. The company had grown away from its core expertise of developing materials and had expanded into fabricating components. When Norman L. Greenman retired, the Board tapped Harry as President to hammer out a vision for refocusing the company. "As far as I was concerned our basic strengths were in materials, and a lot of the fabrication work that we were doing was flat out not what we were best at," Harry remembers.

Consequently, Harry led initiatives to divest several business segments. At the same time, he took a hard look at internal processes, which led to layoffs throughout the company. "Our profits were shrinking tremendously, and we had to do something," Harry explains. "The decisions about products were easy. What was difficult was the people side. For those we laid off, we did our best to be as generous as possible and to help them find other employment."

Civic-minded, Harry served as Chairman of The Boston Foundation for Sight, on the Executive Committee and Board of Directors of the Connecticut Business and Industry Association, as Trustee of the Connecticut Policy and Economic Council and several terms as a member of the Board of Trustees and incorporator of the Windham Community Memorial Hospital. At age 91, Harry currently serves on the Board of the University of Connecticut Institute of Materials Science, where he was former Chairman and on the President of the University of Connecticut's Committee on Technology Commercialization.



1993

The company divests Flexible Interconnections Division.

1994

The company divests U.S.-based Power Distribution Division.

1995

The company divests Soladyne.

**Rogers divests itself of non-core businesses and expands its international footprint and core offerings.**

Rogers Southeast Asia (RSA) opens in Hong Kong to support growing markets in Southeast Asia.





"Sales outside the United States are quite important to us, and their importance is growing. Our sales in Europe and Asia will increase as we move into the next century. As long as our products solve problems for our customers, and we can provide appropriate technical support, we can expect healthy sales worldwide."

—Harry Birkenruth, quoted in *DesignNews*, May 20, 1996

1996

Rogers achieves consolidated sales of \$173 million.

Rogers acquires BISCO® Products from Dow Corning Corporation. The high-performance BISCO® cellular silicone foam products continue to be sold under the BISCO® brand name. BISCO® Materials Unit in Elk Grove Village, Illinois, is part of the Rogers High Performance Elastomers Division.

Left: Employees at the RSA office in Hong Kong.





## **R&D at Rogers: “There Is Always A New Challenge, A New Problem to be Solved”**

What exactly does Rogers do? “We don’t make circuit boards, but we make materials that other people turn into circuit boards. We don’t make shoes, but we make the materials that make shoes comfortable. In other words, we make great stuff and our customers turn it into great things,” said Dave Sherman, Manager of Technical Services.

Ever since Peter Rogers combined varieties of pulp to make paper, Rogers’ Research & Development (R&D) program has been experimenting with mixing fibers such as cellulose, glass, synthetic, organic and ceramic fibers with elastomers and other plastics and chemicals to create completely new materials or re-innovate existing ones.

Always pushing boundaries, always developing, Rogers secured a solid reputation for producing materials-enabled solutions to meet challenging customer problems. “More often than not, customers would seek us out to solve their problems or to help them to create new value propositions for their customers,” said Dirk Baars, Director, Innovation Center West.

The ideal Rogers R&D team member is someone with a natural curiosity. “Invariably the people who work in R&D are constantly tinkering, even in their hobbies,” said Dave. “They’re constantly trying to make something better, whether it’s a process, material or product.”

Curiosity is fueled by the Rogers culture, which encourages the freedom to take risks. “It’s not about doing something new for a cool factor but to do something that solves a problem or gets beyond a limitation,” said Dirk. “It’s really a combination of innovation and entrepreneurship. It’s about making innovation real.”

Above all, collaborating with customers is the key to success. “True innovation doesn’t come from a scientist in the lab but instead, from



## ROGERS IS THE IF COMPANY

**W**hen an engineer says, "If we had a material that had the toughness of laminated plastics and the resilience of rubber, we could improve our product," he is automatically saying that someone ought to take a look at Rogers.

Every time he says "if," he may be saying "Rogers," which has fulfilled so many industrial "ifs."

No company in the world has mixed more combinations of chemicals and fibers (reinforced chemicals) than has Rogers Corporation. On the other hand, we are free to admit that this has not resulted in any startling volume of products that have not been

However, with the almost daily addition of more man-made fibers and of more chemicals to the already large groups upon which we can draw, our abilities and industry's needs are coming closer together. And while we mixed by the beater process exclusively for well over 100 years, we're now doing it by extrusion and have other methods in the works.

addition of chemicals which we can use to meet needs are we mixed or well over extrusion and

to develop materials; we can literally design them. We know so much about some combinations that, given a set of characteristics, we automatically know what combinations of fibers and chemicals will produce those characteristics. Similarly, we can predict the characteristics of an amazing number of combinations.

Above: From *Here's Rogers Again*, 1954.

scientists who collaborate and listen to customers," explains Dave. The Rogers team has deep expertise and knowledge in materials, but it's the customer who knows whether a material will work or not in real life.

"We have the best job in the world," said Dave. "By solving problems, we're never doing the same thing. There is always a new challenge, a new problem to be solved."

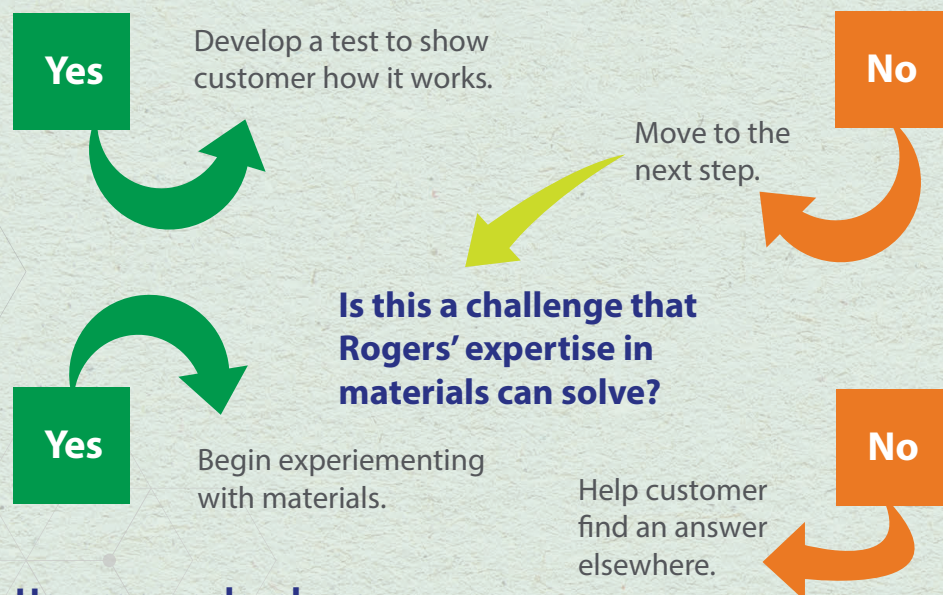


# The Rogers Way to Innovate

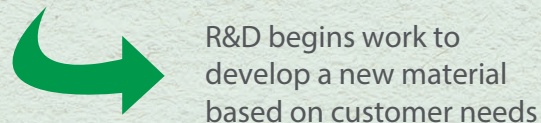
## Listen to customers and ask a lot of questions.

- What do they need?
- What challenges are they facing?
- How will they use the material?
- What keeps them up at night?

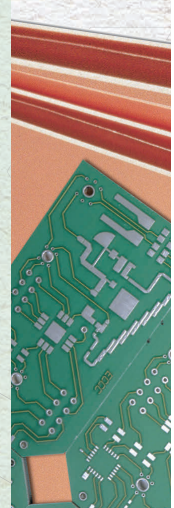
## Do we have existing materials that can solve their problem?



## How can we develop a material to solve their problems?



**Test, test and test again.  
Demonstrate how the product works.  
Set industry norms for testing new materials.**





# SCOOP

A QUARTERLY PUBLICATION OF THE MOLDING MATERIALS DIVISION OF THE ROGERS CORPORATION

SPRING OF '81

## New Union Officers Elected



Recently elected officers of Maple Lodge Local 1554, United Paperworkers International. Include: Dan Grierson, secretary; Phil Koslowski, vice president; Wayne Waldron, chief steward; Bob Waldron, president, and (front) Clarence Lewis, treasurer.

MMD employees belonging to Maple Lodge Local 1554, United Paperworkers International, chose Third Shift Utility Person Bob Waldron as their new president during an election in December.

Bob, a 12-year veteran of MMD's hourly workforce, was sworn in for a two-year term in January, succeeding Tony Staskunas, who had served as the local's president since 1973.

Other officers elected included First Shift Mill Operator Phil Koslowski as vice-president and First Shift Premix Helper Dan Grierson as secretary. Phil, who has worked at MMD since 1973, and Dan, who joined MMD three years ago, will be serving their first terms in their respective offices.

Elected to his second term as chief steward was First Shift Long Glass Blender Operator Wayne Chalou, a four-year MMD veteran. Second Shift Long Glass Premix Operator Clarence Lewis, who has worked at MMD since 1976, was chosen to serve his third term as the local's treasurer.

Congratulations to the new officers!

## Old Ideas to be Tried Anew

A British visitor to MMD in February made some suggestions about our work in asbestos-free matrix that are causing us to revive ideas we had tried and abandoned some 30 years ago.



British visitor Raymond Lee had some thoughts on giving new twists to some old ideas.

Raymond Lee, manufacturing technical director for E.A. Chamberlain, Ltd., of Nailsworth, England, toured our plant during a trip to Rogers to exchange technical information. His firm, a Rogers Corporation licensee, produces S/F duroids® and manufactures a product similar to MMD's R435.

"Mr. Lee gave us some ideas for re-evaluating an old technology," said MMD Plant Manager Curly Maron. He said that Lee noted the thoroughness of our in-process checks and final testing, and he praised the high level of technical assistance that MMD gives to distributors and customers.

MAKE IT BETTER!

Left: From *Scoop*, a quarterly publication of the molding materials division of the Rogers Corporation.

# 1997

Walter E. Boomer is named President and CEO. Birkenruth retires and becomes Chairman of the Board.

Rogers acquires a second manufacturing business in Ghent, Belgium. Rogers Induflex N.V. manufactures industrial multilayer laminates for EMI/RFI shielding applications.

RO3000® and RO4000® high frequency laminates are a breakthrough for commercial microwave applications because their electrical properties are almost as good as PTFE or ceramic, yet can be processed using standard printed-circuit fabrication techniques. These products are the cornerstone of today's RF business, enabling key applications such as wireless infrastructure, aerospace and defense and automotive safety systems.



# Walter E. Boomer

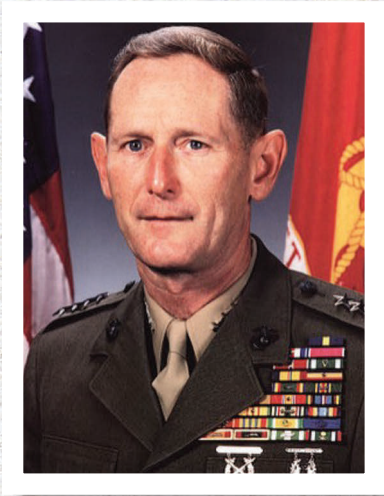
(1997-2002)

**“Walter E. Boomer brings to Rogers the most unusual background and set of experiences of any of the 20th-century Rogers CEOs. He is, first of all—with no contradiction—a tough-minded gentleman, a gentle man. He shares Rogers’ traditional values of deep respect for the individual, trust and hard work. He is deeply committed to making Rogers an even better company, and he is highly motivated to grow our company rapidly and soundly.”**

**-Harry Birkenruth**



WE Boomer



Above: Walter E. Boomer  
Courtesy of the U.S. Marine Corps.

With the impending retirement of Harry Birkenruth in 1997, the professional search firm hired by the Rogers Board to find his replacement suggested an unconventional candidate: Walter E. "Walt" Boomer.

Walt had served 34 years in the United States Marine Corps, rising to the ranks of four-star general and assistant commandant of the United States Marine Corps. He fought in two tours in Vietnam and led all Marines in Operations Desert Shield and Desert Storm during the Gulf War. He graduated with distinction from the Naval War College and received a B.A. from Duke University and a master's degree in Technology of Management from American University.

Before his tenure at Rogers, Walt had served as Executive Vice President of McDermott International and President of Babcock and Wilcox Power Generation Group.

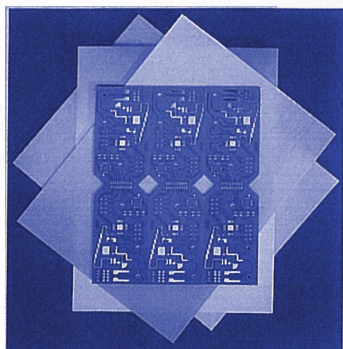
Walt's superior leadership capabilities, outside perspective and global acumen more than made up for his limited prior business experience. At a time when the company needed to globalize, Walt had the expertise needed to expand in Asia, particularly China. Highly respected and well-loved, he recruited the talent needed to grow the company, implemented changes that planted the seeds to eventually move Rogers' headquarters westward and made investments in the early days of wireless, which proved fruitful in Rogers' future.

"Walt wasn't a chit-chat kind of guy, but he had the respect of everyone and also their trust," said Bob Daigle, Chief Technology Officer and Senior Vice President. "He was direct, a strong leader and had high expectations. You knew where you stood with Walt."



# A Roundup of Rogers' Specialty Materials

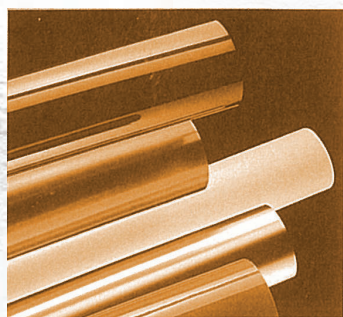
circa 1990s



## Microwave and High Frequency Circuit Materials

*Microwave Materials Divisions, Rogers N.V.*

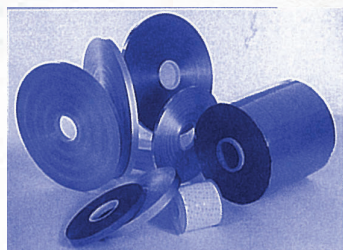
Rogers' specialty high frequency circuit laminate materials handle high frequency and high performance requirements of wireless communication. Easy-to-process RO4000® laminates are used for pager and cellphone antennas, satellite television signal converters and other high volume commercial applications. High frequency RO3000® laminates are used in cellular base stations and satellites. Rogers' traditional RT/duriod® and DUROID® PTFE based microwave laminates originated with the first military radar communications, while temperature stable TMM® laminates extend the capability range.



## Flexible Circuit Materials

*Circuit Materials Division*

Rogers' flexible circuit materials are used in hard disk drives, portable computers and cell phones. Flexible interconnections made of R/flex® materials withstand the wear and tear of folding, bending or constant flexing. Many read-write heads in hard disk drives are interconnected or suspended with a flexible polyimide circuit laminate from Rogers.

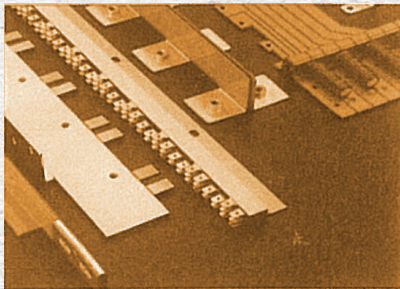


## Induflex® Laminates

*Rogers-Induflex N.V.*

Rogers' Induflex® materials are thin aluminum and copper clad laminates for shielding electromagnetic and radio frequency interference (EMI/RFI). Shielding laminates incorporate polyesters, adhesives, coatings and other materials and are converted into specialty tapes that shield telecommunication and data communication cables.





### **Power Distribution Busbars**

*Rogers N.V.*

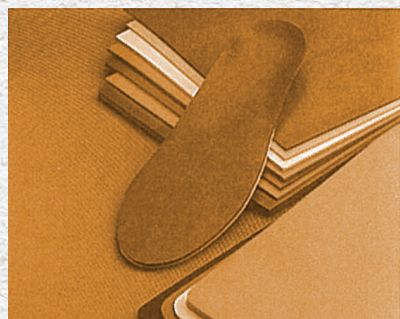
Available in Europe, MEKTRON® busbars convert and distribute power for mass transit, communications and industrial motor applications. They smooth the operation of the electric traction motors that power European mass transit systems and provide reliable power distribution and control in cellular base stations and telephone switching systems.



### **PORON® High Performance Elastomers**

*PORON® Materials Unit and BISCO® Materials Unit*

PORON® high performance urethane foams and silicone materials resist compression set (collapse) and remain resilient under repeated shock and vibration and over wide temperature fluctuations. PORON® urethane foams include flame retardant and low fogging materials in several grades and many thicknesses. Nearly all thicknesses meet UL® 94 HBF flammability requirements. PORON® foams are easily fabricated into parts for use as pads, seals and gaskets in the transportation, electronics and consumer markets. PORON® silicone materials satisfy the most stringent standards for flame retardance and toxic smoke emission primarily in transportation, electronics and food service applications. In addition to uses as high temperature gaskets, seals and pads, when these materials are combined with fabrics and foils, they can be used for heat and EMI/RFI shields, fireblocks and engine noise isolators. PORON® silicones are available as foam and solid materials.



### **PORON® Footwear Materials**

*Consumer and Printing Center*

The high performance qualities of PORON® materials provide the most durable insole cushioning available for life-of-the-shoe comfort. Many of the world's most respected footwear and insole manufacturers use PORON® materials. PORON® cushion insoles have added comfort to over 200 million pairs of shoes.

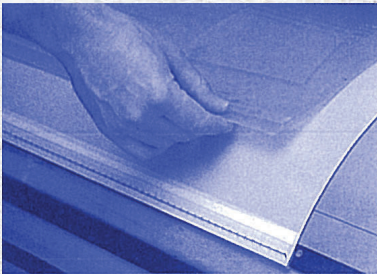




### **PORON® MEDICAL® Materials**

*Consumer and Printing Center*

PORON® MEDICAL® materials are the leading soft tissue supplement materials for orthotics, outperforming other padding products for energy absorption, resiliency and comfort. PORON® Medical materials meet USP Class VI Certification and carry the American Podiatric Medical Association Seal of Approval.



### **R/bak® Compressible Plate Mounting Materials**

*Consumer and Printing Center*

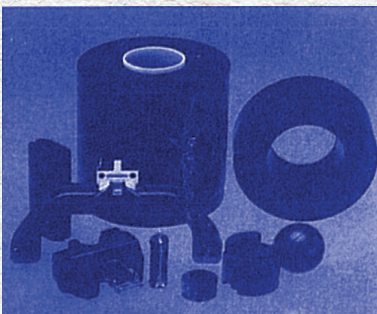
R/bak® compressible products, used to mount flexographic printing plates, improve print quality on corrugated and boxboard containers, plastic bags and labels. The use of R/bak® materials allows flexography to rival the print quality of more expensive offset printing for attractive packages that can help sell the products they contain.



### **ENDUR® Elastomer Components**

*Elastomer Components Unit, Rogers INOAC Corporation, Rogers N.V.*

ENDUR® elastomer components are used by leading manufacturers of copiers, computer printers, automated teller machines and mail sorters. ENDUR® rollers, belts and wheels are engineered for properties that set images, facilitate paper movement or allow machines to count one bill at a time.

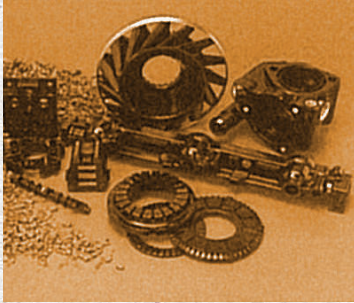


### **Nitrophyl® Floats**

*Elastomer Components Unit*

Floats allow for oil and fuel level sensing in cars, trucks, marine motors and propane cooking tanks. Rogers' Nitrophyl® molded floats, available in custom and standard sizes, are proven to resist fuels, fuel mixtures and many other liquids.

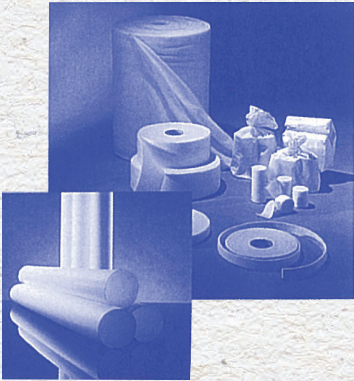




### **Moldable Phenolic Composites**

#### *Molding Materials Division*

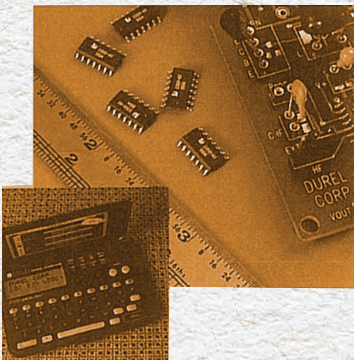
Rogers' MPC® and RX® moldable phenolic composites are used to make engine and transmission parts for cars and trucks and insulating parts in electric motors. These molded parts, often used to replace metal, can withstand high temperatures, withstand high stress and improve performance. Rogers provides rapid prototyping of new designs.



### **Nonwoven Materials**

#### *Composite Materials Division*

Rogers' highloft, air laid, needled, nonwoven fabrics are used for padding, thermal insulation and prefilter applications. Medical applications include orthopedic undercast and splint padding and wound care. Printing applications include nonwoven dampening and doctor sleeves used in lithographic printing.



### **Electroluminescent Lamps and Inverters**

#### *Durel Corporation*

DUREL® electroluminescent (EL) lamps and inverters are used to light keypads and displays in telephones, pagers, global positioning equipment, personal organizers and data banks. Durel's unique EL technology was the first to provide a thin, flexible and durable lamp for small package sizes. Breakthrough applications include a glowing watch dial technology, illuminated keyless entry system for cars and trucks and uniform dashboard lighting. DUREL® lamp systems are ideal for wireless communication handsets.



# 1998

Rogers' net sales at year end are \$245 million, 14% higher than those of 1997. Combined sales, which includes 50% of sales from Rogers' two joint ventures were strong contributors to the company's results.

Rogers undertakes a multimillion-dollar expansion at Rogers Microwave Materials Division in Chandler, Arizona and begins construction of a new microwave manufacturing facility and busbar manufacturing facility at Rogers N.V. in Belgium.

Rogers opens a sales office in Hsin-Chu, Taiwan.

Rogers acquires a line of printing pressroom products from Imation Corp., formerly a business of 3M Corporation. This acquisition complements the company's existing line of R/bak® compressible plate mounting materials for flexography.

Right: Rogers Corporation opens sales office in Taiwan.



Below: Rogers Corporation is listed on the New York Stock Exchange.



Right: *Time* magazine featuring Y2K.



# 1999

Net worldwide sales total \$247.8 million, 14% higher than in 1998.





Rogers builds a new manufacturing plant in Ghent, Belgium, and completes a series of major capacity expansions in its U.S. plants with plans for future expansion to meet demand for wireless communications products and services. RO4000® high frequency circuit board laminates are the first choice of customers in this market.

The company acquires Cytec Fiberite, an engineered molding compounds business.

Rogers forms a new joint venture, Polyimide Laminate Systems, LLC, (PLS), to manufacture specialty flexible laminates for Hutchinson Technology, Inc. (HTI), a leading global supplier of suspension assemblies for hard disk drives.

Rogers forms a 50/50 joint venture with Mitsui Chemicals, Inc., PLS, to manufacture specialty flexible laminates for Hutchinson Technology, Inc., the world's leading supplier of suspension assemblies for hard disk drives.

The Y2K bug creates global worry that computer systems worldwide will shut down when the clock flips to 2000, as most were not coded to register dates beyond 1999. Like other companies, Rogers' Information Technology department works intensely on the issue leading up to December 31, 1999. When January 1, 2000, arrives, the company suffers no setbacks in its computer networks.

Rogers' stock is listed on the New York Stock Exchange (NYSE: ROG). In May, the stock is split two for one.



# 2000





# 2000

Rogers Corporation is included in the December Standard & Poor's SmallCap 600 Index.

Durel Corporation expands its manufacturing capacity at its Chandler, Arizona facility to meet global market demand.

Rogers Technologies Singapore, Inc. (RTSI) and Rogers Korea, Inc. (RKI) open.



Durel Corporation  
Chandler, AZ

Above: Durel Corporation  
facility in Chandler, AZ.

The logo for Rogers Korea Inc. features a stylized green 'R' with a white dot inside. To the right of the logo, the text "ROGERS KOREA INC." is displayed in a bold, black, sans-serif font. The background is a dark, reflective surface with a grid pattern of light gray lines.

Above: Rogers Korea, Inc.  
offices.



# 2001

Net sales drop to \$216 million amid a national recession, down 13% from 2000.

Rogers opens a second office in Guangzhou, China to serve the lithographic printing industry.

Rogers' newest joint venture, Rogers Chang Chun Technologies, in Hsin-Chu, Taiwan, begins manufacturing and distributing R/flex® flexible circuit laminates to Taiwan.

Rogers Circuit Materials and Microwave Materials, both based in Arizona, consolidate to create the new Advanced Circuit Materials (ACM) business segment.

Terrorist attacks hit the U.S. World Trade Center in New York City and the Pentagon in Washington, D.C.

The company introduces ZYVEX® liquid crystalline polymer materials for high performance electronics. ZYVEX TeraClad®, a single-clad laminate, is developed for flexible circuit applications.





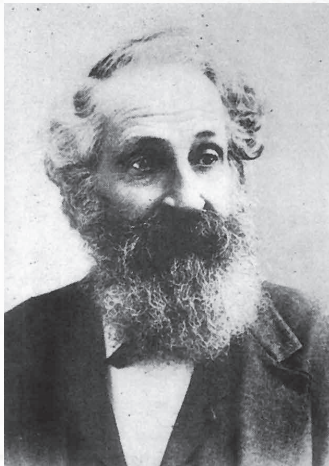
# Rogers Presidents and Their Contributions



*Peter Rogers*

**Peter Rogers  
(1832-1841)**

Company Founder



**Henry Ellsworth Rogers  
(1841-1890)**

Revolutionized paper industry by discovering innovative way to remove ink from paper

**Knight Ellsworth Rogers  
(1890-1913)**

An inventor like his father Henry, he led Rogers through a period of great growth







**Gertrude Huntington Rogers  
(1913-1927)**

Respected leader credited for leading Rogers through the trying 1920s

**Anthony H. Brackett  
(1927)**

Named President for brief period when company reincorporated in 1927



**Charles Ray  
(1927-1938)**

Increased efficiency and productivity and explored diversification possibilities

**Huntington P. Faxon  
(1938-1944)**

Oversaw move from Manchester to the Goodyear plant along with consolidation of the company







**William H. Raye  
(1944-1946)**

Known for turning troubled companies around; came out of retirement to lead Rogers until a new president could be vetted and hired following Faxon's untimely death

**Saul M. Silverstein  
(1946-1966)**

Keen salesman and people person who led diversification efforts at Rogers; also became an international expert in labor relations



**Norman L. Greenman  
(1966-1992)**

Visionary engineer who establish several multi-national and domestic joint ventures; helped transform Rogers from a small company to a high-tech manufacturer of polymer-based materials and diverse components for the electronics industry

**Harry H. Birkenruth  
(1992-1997)**

A "Rogers man from Day 1" who grew into a father figure at the company known for his good business sense and love of people; streamlined processes, divested fabricating divisions and refocused company on its expertise in materials







**Walter E. Boomer  
(1997-2002)**

Brought an elite level of leadership to the company along with outside thinking and a global perspective; implemented change that planted the seeds to eventually move Rogers' headquarters westward

**Robert D. Wachob  
(2002-2011)**

Led Rogers through the 2007 recession; had the foresight to keep Rogers focused on technologies that would be critical for future growth, including wireless communications and electric vehicles



**Bruce D. Hoechner  
(2011-2022)**

Enthusiastic and experienced global executive influential in Rogers' climb to become a leading global materials company; strategically repositioned Rogers, leading to a historic period of company growth that continues today



**Colin Gouveia  
(2023- )**

Experienced in specialty chemical and materials manufacturing industries; tapped to lead Rogers through exciting market opportunities in the 21st Century and to continue the company's ability to capitalize on growth of best-in-class solutions and materials innovations







## Chapter 6

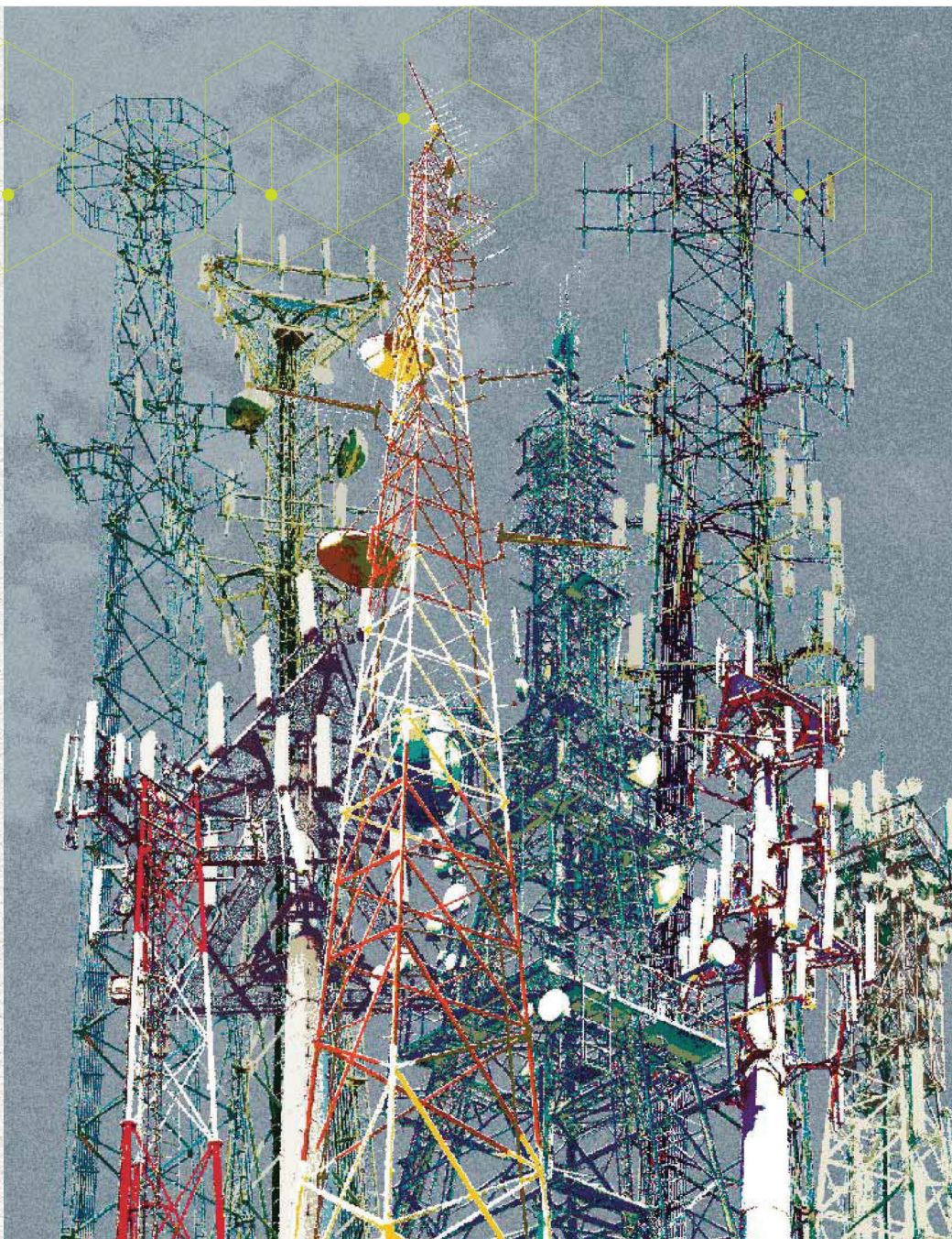
# High Performance Solutions for a Changing World

(2002-2021)

A new millennium.

A new era of reinvention, innovation and ingenuity at Rogers. Though the future was full of promise, it became evident that for Rogers to excel in an increasingly modern market, the company needed to accelerate growth through acquisitions and the ongoing development of bold, new products. At the same time, Rogers needed to adapt core materials for new technologies and applications, such as the ever-increasing demand for high volume, low cost commercial wireless communications. President and CEO Walt Boomer had positioned the company for future growth, but under the leadership of President and CEO Robert D. Wachob, Rogers set an ambitious goal: to be the first choice of customers worldwide for specialty material products, and to achieve \$1 billion in annual revenue.





Wachob felt that it was attainable in no small part because of Rogers people. "It is our people around the world who are embracing change and improving all that we do," said Wachob at the time. "Their resilience and ingenuity are making Rogers into a world class corporation. It is through their hard work that we achieve record sales and profits."

What Rogers leadership could not have anticipated is the 2007-09 Great Recession. Whereas many companies went under during the financial crisis, Rogers managed to meet its goals. Still, there were obstacles the company struggled to overcome, mainly due to doing business the traditional Rogers way.



“Rogers had a wonderful capability of thinking small, and that’s not always bad,” said Bill Mitchell, a former Board member. “Rogers employees were intensely loyal to the company. They knew what they could do and they did it well. But the company was located in the middle of nowhere, and it was hard to recruit new perspectives and thinking. Plus, Rogers wasn’t a shooting star, and it didn’t want to be. There was too much inertia.”

Wachob’s tenure ended in 2011 when he handed over the reins to Bruce D. Hoechner. Bruce accelerated plans for growth and by 2015, the company was reaping the rewards with record sales and profitability. It was Rogers’ 185th year of doing business, all the more remarkable considering 80 percent of all companies that existed before 1980 were out of business.

Equally important, Bruce recognized the need for change and made the hard decision to relocate company headquarters west to Chandler, Arizona, in 2017. The move from Connecticut closed a chapter in company history, but with an established presence for 50 years in the Valley of the Sun, Rogers was confident the area had the infrastructure and accessibility to support its long-term strategy and plans for growth and expansion.

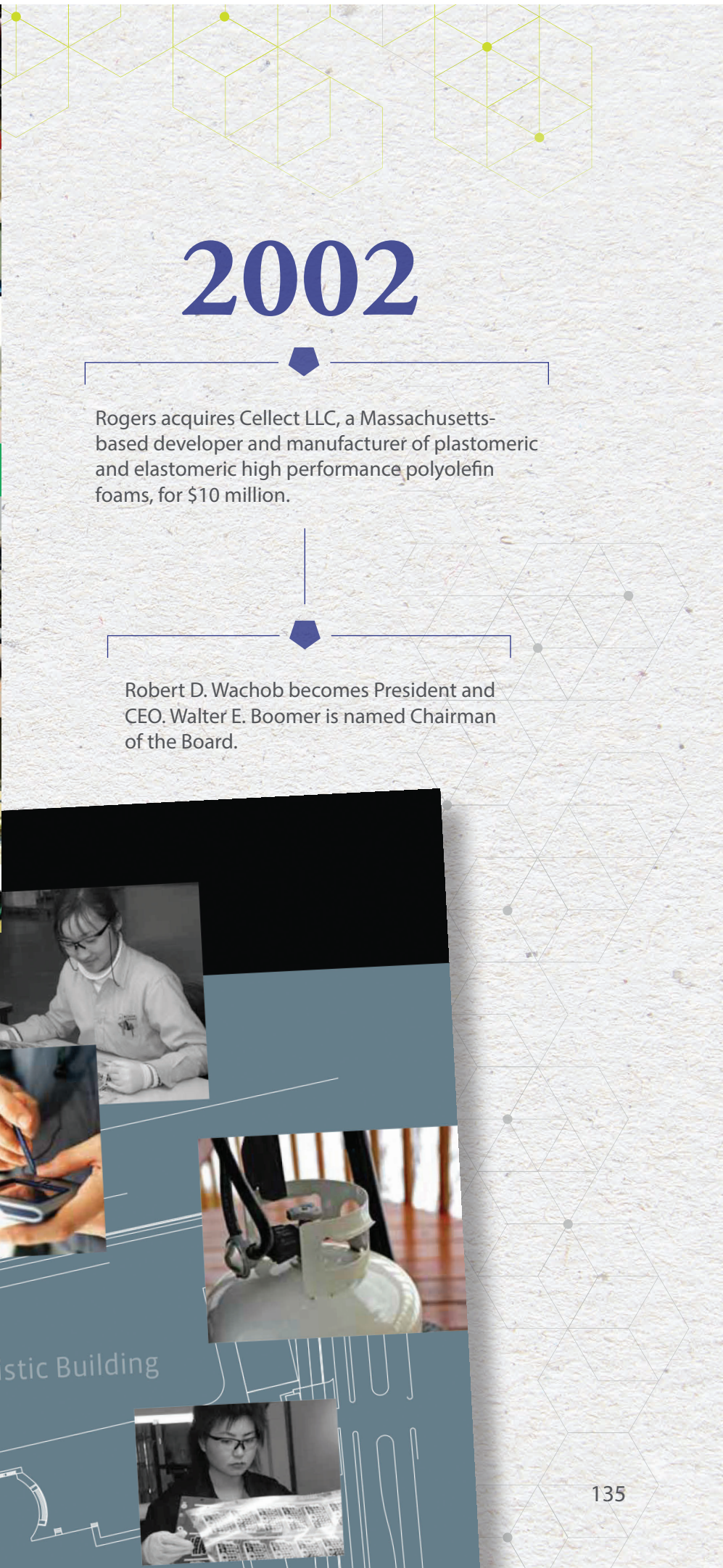


Above and Right:  
Pages from the Rogers  
Corporation 2006  
Annual Report.





A Dedicated Workforce | Record Results



# 2002

Rogers acquires Collect LLC, a Massachusetts-based developer and manufacturer of plastomeric and elastomeric high performance polyolefin foams, for \$10 million.

Robert D. Wachob becomes President and CEO. Walter E. Boomer is named Chairman of the Board.



# Robert D. Wachob

(2002-2011)

**Before being named President and CEO in 2002, Robert D. “Bob” Wachob had worked at Rogers for 27 years in different roles, giving him intimate knowledge of Rogers’ operations. Easy going and easy to talk to, Bob played a pivotal role in keeping Rogers afloat during the challenging economic times and crises of the 2007-09 Great Recession.**



Robert D. Wachob



Above: Robert D. Wachob

During his tenure, Robert D. (Bob) Wachob targeted three megatrends for Rogers' growth: internet growth, expansion of mass transit and clean technology, including electric cars. "We continue to look for things inside the three megatrends," Bob said at the time. "We look for opportunities where people have problems and then we go in and solve them. But we're not locked into those three things. We're very careful with our capital. We're happy when we pay off debt."

Bob was also adept at maintaining the elements of Rogers' corporate culture that would be impactful for the future. This included a six-point outline to help Rogers meet its goal of becoming a global specialty material products company with the potential to achieve \$1 billion in annual revenue.

"The future looks bright as we have more opportunities to grow sales and profits than during any time that I can remember," he said in an early 2000s annual report. "It is the continued support of our loyal customers, our employees worldwide and our shareholders that will assure the continued success of Rogers Corporation."

**In the early 2000s, Rogers Corporation set an ambitious goal to be the first choice of customers worldwide for specialty material products, and to achieve \$1 billion in annual revenue. To do this, six points were outlined:**

- Be viewed by customers as the best local supplier worldwide.
- Foster a corporate culture of innovation, teamwork, employee empowerment and individual development.
- Achieve sales growth targets by developing new products and/or entering new markets.
- Implement common business processes and information systems which improve the company's competitive position.
- Become the best manufacturer in each of our industries.
- Double sales and earnings every five years.



# Rogers: Keeping the World Connected

There's virtually no area of modern communication technology that doesn't rely on Rogers materials in one form or another. Mobile networks from GSM to 5G systems, wireless infrastructure antennas, power amplifiers, microwave backhaul radios and small cells are a few of the materials that communications infrastructure designers are using to design next-generation networks. And all sorts of seals and gasketing solutions offer crucial protection to sensitive equipment.

"Our high performance foams seal and protect the mobile devices that keep us connected every day," said Stephanie Zhang, Market Segment Manager for Rogers Corporation's Elastomeric Material Solutions business. "With all the smart phones and tablets dropped every day around the world, the reason they seldom break is because of our PORON® urethane foams. And our dust sealing parts keep dust away from sensitive parts. Our materials are the industry standard for mobile device cushioning and sealing."

**Rogers RO4730G3™ Patented Hollow-Sphere Laminates**

RO4730G3™ antenna laminates use Rogers' original patent protected hollow-sphere technology. You can depend on Rogers for innovation leadership, reliability, and experience.

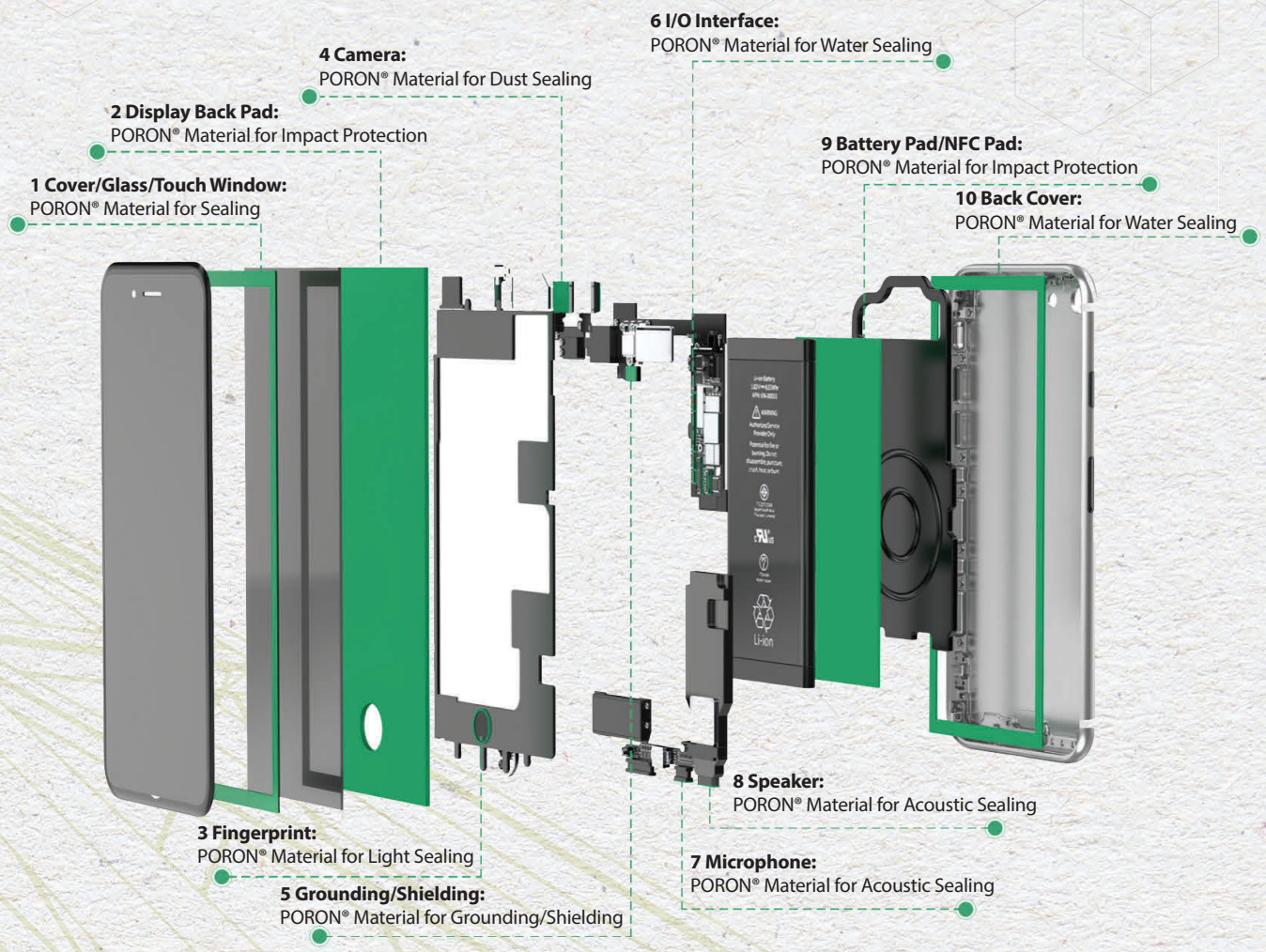
Rogers' innovation engine delivers again! Using patent protected hollow-sphere technology, Rogers RO4730G3 circuit laminates have been engineered for next-generation wireless PCB antennas – delivering reliable performance at 3.0 Dk for more than 3 years.

These low-loss, cost-effective circuit materials are lead-free process compatible and flame retardant. RO4730G3 laminates support broadband antenna designs with excellent PIM performance, outstanding dimensional stability and multilayer board design capability.

Built on the proven technology used in Rogers RO4000® thermoset resin/ceramic/woven glass materials, RO4730G3 laminates expand Rogers antenna grade product

MATERIAL	Dk	PIM*
RO4730G3 Ceramic Hydrocarbon	3.0	<-160 dBc
RO4700BR™ Series Ceramic Hydrocarbon	2.55 to 3.0	<-160 dBc





**Polymeric/elastomeric engineered material solutions for critical applications**

**PORON® Polyurethanes**

- PORON® Industrial
- PORON® Comfort
- XRD® Impact Technology
- R/bak®

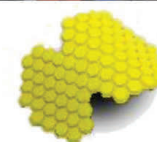
**Griswold® Cellular Elastomers and Polyurethanes**

- KUSHON®
- Griswold® Cellular Rubber

**BISCO® Silicones**

**ARLON® Silicones**

**DeWAL® PTFE and UHMW Materials**





# 2002

Rogers launches BISCO EC-2000® Series Silicones, the industry's first electrically conductive EMI/RFI shielding material available in wide, continuous rolls.

The company opens Rogers Technologies Suzhou Company Lt, (RSZ) in Suzhou, China, to manufacture the ENDUR® product line.

Rogers divests its moldable composites business, located in Manchester, Connecticut.



Above: Rogers employee, Sun Yuanyuan, working in Suzhou, China.



# 2003

Rogers purchases a 215,000-square-foot facility in Carol Stream, Illinois, to manufacture the newly acquired Polyolefin materials as well as its BISCO® silicone foams.

Rogers opens a manufacturing facility in Suzhou, China, to produce ENDUR® products. These components are custom-molded elastomeric products developed to customers' unique specifications for use in products that require extremely precise document rolling.

Rogers acquires full interest in DUREL® from 3M Company for \$26 million in cash and fully integrates the company into Rogers as a new business unit. Rogers is now the world's largest manufacturer of high quality electroluminescent lighting systems. The company's patented EL driver and lamp technology is used in many portable electronics as well as in automotive and computer applications, sporting goods and interior automotive controls.

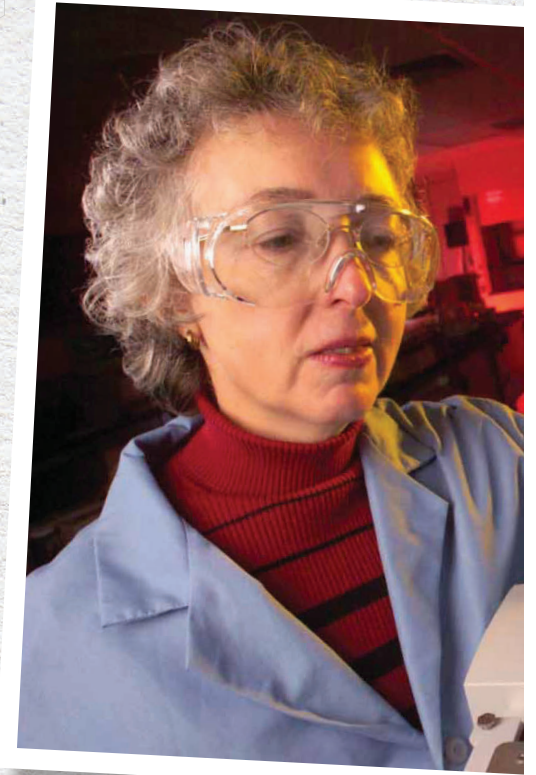
Rogers' net earnings increase 41% for the year, driven by strong sales in cell phones, 3G base stations and satellite TV receivers.





# 2004

The NASA Perseverance rover lands on Mars. Since the late 1950s, Rogers has been part of every manned and unmanned NASA space program providing high frequency circuit materials at the core of the communications equipment and radar sensors on spacecraft. The company's high frequency circuit materials business was born from collaborative efforts with NASA's Jet Propulsion Labs in the late 1950s and 1960s. Composite technology Rogers had developed for gaskets used in harsh environments enabled the first generation of high frequency circuit materials. The Perseverance rover is fashioned in part from Rogers RT/duroid® 6000 laminates and TMM® temperature stable laminates.



Rogers opens a busbar manufacturing plant on its growing Suzhou, China, campus, to increase production capacity and serve the Asia market.

Rogers ceases operations at its Windham, Connecticut, facility and relocates manufacturing for ENDUR® and Nitrophyl® to the Suzhou, China, campus.



Rogers acquires KF Inc., in Hwasung City, Korea, a nitrile butadiene rubber (NBR) float business for approximately \$3.5 million. KF Inc. manufactures level-sensing devices for the automotive market. The purchase expands Rogers' presence in worldwide markets and expands sales opportunities for existing products, such as the floats portion of the ECD business.

## Products

**R/flex® Flexible Circuit Materials**

**R/flex® 8080 Liquid Photoimageable Covercoats**

**R/flex® 3600, 3850 and 3908 Liquid Crystalline Polymer Laminates**

**R/flex CRYSTAL® laminates and coverfilms**

**RO4000® and RO3000® High Frequency Circuit Materials**

**RT/duroid® and TMM® High Frequency Circuit Materials**

**SSLAM Flexible Circuit Laminates**

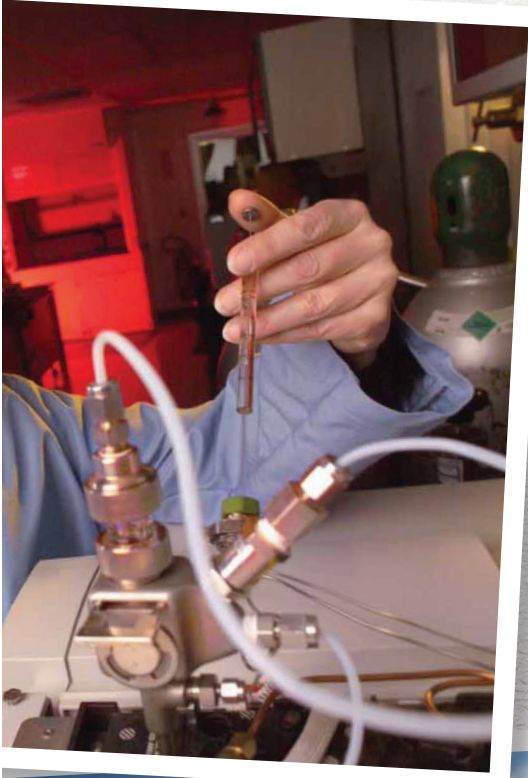
**INDUFLEX™ Shielding Materials**



# 2005

Sales from outside the U.S. grow to 67% of total sales, up from 25% a decade ago.

The High Performance Foams business in Woodstock, Connecticut, is recognized for its OSHA Voluntary Protection Program (VPP) "Star" designation. Star status is the top OSHA award given to facilities meeting the highest standards in employee and workplace safety.



# 2006

Rogers introduces a new business, Thermal Management Solutions (TMS).

In six years, sales grow 83% to \$454 million and earnings per diluted share increase 67% to \$2.69.



# 2007

Rogers celebrates its 175th anniversary.

Laminates

\$  
\$



# Building a Board

Rogers Corporation has had a board of directors in place since the days a group of investors purchased the company from the Rogers family. Today, the Rogers Board serves to provide independent, transparent and responsive guidance to the interests of shareholders.

“It’s hard for board members who have been active operators of companies not to reach down and put their hands on the wheel and steer a company themselves, but the job of a board is not to manage the company but to oversee its management and operations,” explained former Rogers Board member Bill Mitchell. With a background in materials science and experience starting companies in dozens of countries, Mitchell’s expertise helped guide the company from the 1990s into the new millennium. “We’re here to ensure there is a viable strategy in place and that the strategy is being implemented. We also have oversight responsibilities to see that the company is run properly to the highest standards of business ethics and that we are achieving acceptable returns to shareholders.”





*"The Board challenges us in an appropriate way. They ask questions. They want data, but they are very fair and supportive—and always have been. They are also smart people with lots of varied experiences that they bring to the Board room."*

—Bruce D. Hoechner, Rogers President and CEO (Ret.)

Left: Rogers Board of Directors, 2005. Back row, Robert D. Wachob, William E. Mitchell, Walter E. Boomer, Robert G. Paul; middle: Gregory B. Howey, Leonard R. Jaskol, Leonard M. Baker, Edward L. Diefenthal; front: Charles M. Brennan, III, Eileen S. Kraus; not pictured: Carol R. Jensen.

# 2007

A record 12 new products are introduced to the market, up from seven in 2006.

*"During my tenure on the Rogers Board, my colleagues came from varied backgrounds and diverse experiences which allowed for great discussion on different issues. But the members maintained a collegial attitude which permitted good debate that led to consensus."*

—Carol R. Jensen, a 16-year Board Member with a Ph.D. in chemistry and background in chemistry, materials and electronic technologies and markets at 3M, IBM and Dow Chemical



# Rogers Market Segments

circa 2000s

## Portable Communications

High performance materials and components within most handheld electronic devices, including mobile phones and global positioning systems

### TYPICAL APPLICATIONS

#### PRINTED CIRCUIT MATERIALS

*Flexible interconnections*

#### HIGH PERFORMANCE FOAMS

*Gasketing, sealing, cushioning, and shock absorbing materials*

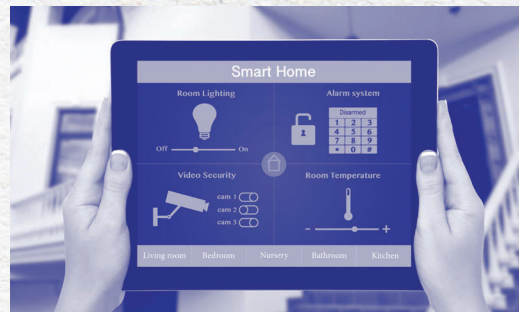
#### CUSTOM ELECTRICAL COMPONENTS

*Electroluminescent backlighting*

*Lamps and drivers*

#### OTHER POLYMER PRODUCTS

*INDUFLEX antenna materials*



### TYPICAL APPLICATIONS

#### PRINTED CIRCUIT MATERIALS

*Low noise block down converters (LNBs) in home satellite TV receivers*

*Flexible circuit interconnects for CD, MP3, DVD players, and flat panel TVs*

*Disk drive recording head electrical components*

#### HIGH PERFORMANCE FOAMS

*Shields, seals, and shock absorbing parts for electronic entertainment devices and appliances*

*Cushioning in flexographic printing plate applications*

*Footwear cushion insoles and inserts*

#### CUSTOM ELECTRICAL COMPONENTS

*Back lighting for displays, dials, and keypads*

#### OTHER POLYMER PRODUCTS

*Laminates for heater circuits used in home appliances*

*Dampening sleeves for lithographic printing systems*

*Floats for use in barbecue propane tank overflow protection*

## Consumer Products

Printed circuit materials for satellite TV receivers and digital video recorder disk drives and foam products to protect components from breaking





## Communication Infrastructure

High frequency materials in cell towers and throughout the world's growing networks; specialty foam gasketing for protecting base stations from harsh environment conditions and high frequency circuit materials to help lower component costs



### TYPICAL APPLICATIONS

#### PRINTED CIRCUIT MATERIALS

*Circuit materials for high speed switching applications*

*Flexible, high speed, high density board-to-board interconnections*

#### HIGH PERFORMANCE FOAMS

*Environmental seals, shielding and absorbing parts*

#### CUSTOM ELECTRICAL COMPONENTS

*Power distribution systems in data storage arrays*

#### OTHER POLYMER PRODUCTS

*Electromagnetic shielding applications*

## Ground Transportation

Advanced circuit materials for automotive collision avoidance systems and electronic toll collection, as well as products that enhance the driving experience with decorative accent lighting, backlighting and protection against noise and vibration



### TYPICAL APPLICATIONS

#### PRINTED CIRCUIT MATERIALS

*Radar sensors for adaptive cruise control*

*Electronic toll collection*

#### HIGH PERFORMANCE FOAMS

*Heat shields, gasketing, seals, gap fillers, and shock absorbing parts.*

*Noise and vibration reduction*

#### CUSTOM ELECTRICAL COMPONENTS

*Busbars for power distribution systems*

*Dashboard display backlighting*

#### OTHER POLYMER PRODUCTS

*Floats for gasoline tank level sensing*



## **Aerospace and Defense**

High frequency circuit materials for radar and guidance systems for missiles and foam products that protect airline passengers from noise, smoke and vibration

### **TYPICAL APPLICATIONS**

#### **PRINTED CIRCUIT MATERIALS**

*Circuit materials for navigation and radar systems*

#### **HIGH PERFORMANCE FOAMS**

*Heat shields, seals, gap fillers, and shock absorbing parts*



## **Alternative Energy**

Materials and components for power conversion modules and power storage elements for solar, wind and other alternative energy from regenerative resources

### **TYPICAL APPLICATIONS**

#### **CUSTOM ELECTRICAL COMPONENTS**

*Power distribution systems for power converters*





#### TYPICAL APPLICATIONS

##### PRINTED CIRCUIT MATERIALS

*Flexible interconnections for handheld medical devices*

##### HIGH PERFORMANCE FOAMS

*Advanced woundcare materials*

*Cushioning for prosthetics, orthotics, diabetic footcare, and podiatric applications*

*Fluid sealing, dust sealing, shock absorbing materials for medical devices and equipment*

##### CUSTOM ELECTRICAL COMPONENTS

*Electroluminescent backlighting for medical devices and monitors*

##### OTHER POLYMER PRODUCTS

*Medical orthopedic undercast and splint padding*

## Healthcare

Materials for improving reliability of medical equipment and quality of care



#### TYPICAL APPLICATIONS

##### PRINTED CIRCUIT MATERIALS

*Packaging materials for high speed, high density integrated circuits*

##### HIGH PERFORMANCE FOAMS

*Polishing pads for semiconductor wafer planarization*

##### CUSTOM ELECTRICAL COMPONENTS

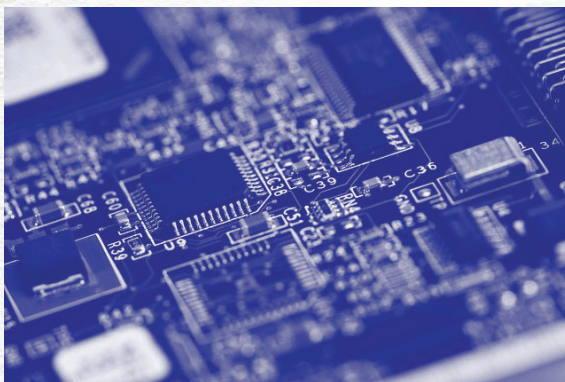
*High voltage semiconductors*

##### OTHER POLYMER PRODUCTS

*Thermal management components for high performance LEDs and ICs*

## Semiconductors

Engineered foams for polishing microchips





# 2008

Sales decline 11.5% in the global downturn but with the sale of the Induflex subsidiary, earnings per diluted share increase 26.5%.

PeopleSoft® implementation is complete.

# 2009

The global recession brings challenges, but Rogers quickly pivots by realigning and restructuring the company to better take advantage of opportunities to grow when the economic recovery starts.

The company acquires silicone business assets of MTI Global, Inc.

The company makes a strategic investment in Solicore, Inc., a world leader for embedded power solutions, offering patented Flexionä advanced ultrathin, flexible, lithium polymer batteries for smart cards, controlled access cards, RFID tags and medical devices.

The company introduces a record 18 new products.





# 2010

Barack Obama is sworn in as the first African American president in U.S. history.

Rogers dissolves its 50/50 Polyimide Laminate Systems (PLS) joint venture with Mitsui Chemicals, Inc.

The company sells remaining shares in the 50/50 Rogers Chang Chun Technology (RCCT) joint venture to Chang Chun Plastics Co., Ltd., in a move to divest non-strategic businesses.

Rogers acquires a polyurethane company, SK Utis in Ansan, South Korea, which already has an established presence in the marketplace, especially in Korea where two of the leading Original Equipment Manufacturers (OEMs) for electronic devices are located.

On June 28, the company rings the closing bell at the New York Stock Exchange to celebrate the 10th anniversary of being listed on the exchange.

A BP oil rig explodes in the Gulf of Mexico, causing a major oil spill.

Sales grow 30% to \$379 million.



Above: The Utis office in Ansan, South Korea

Left: Celebrating the 10th anniversary of being listed on the New York Stock Exchange, Rogers executives ring the closing bell.



# Rogers' Cultural Behaviors

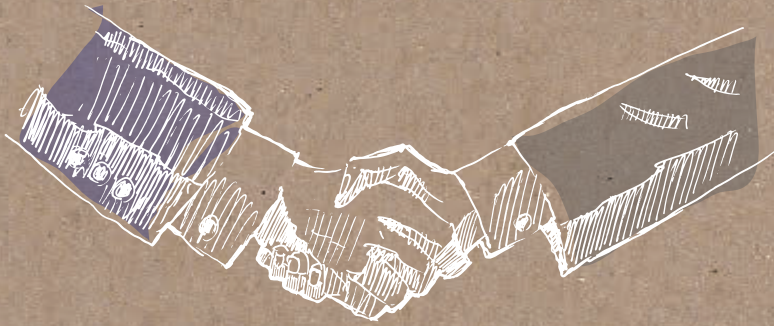


## Live Safely

I actively prevent injuries for everyone, everywhere, every day.

## Trust

I respect people and trust them to do the right thing.



## Just Decide

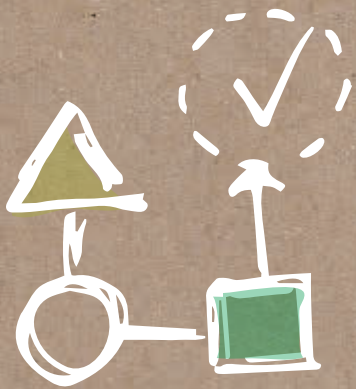
I make informed decisions rapidly to drive progress.

## Speak Openly

I courageously seek and speak the truth.







### Simply Improve

I continuously simplify how I do things to achieve excellence.



### Innovation

I create market-driven solutions that lead to customer success.



### Deliver Results

I align and achieve my goals to deliver our Must-Do results.

# 2011

“Flat Rog,” Rogers’ version of the popular Flat Stanley character from a children’s book, travels to many locations around the world. A global map on the wall in the Roosevelt facility highlighted his travels.



Above: The “Where in the World is Flat Rog” map in the Roosevelt facility in Chandler, AZ. Courtesy of Karen Crawford.

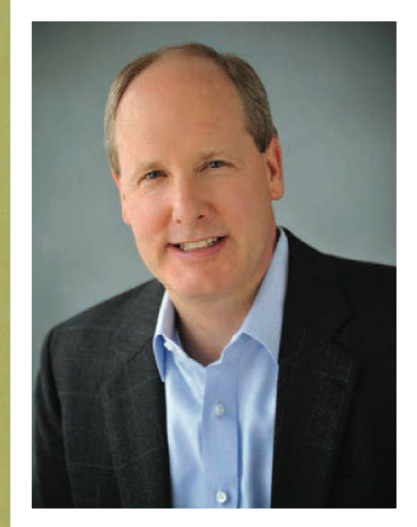
Bruce D. Hoechner becomes President and Chief Executive Officer.



# Bruce D. Hoechner

(2011-2022)

Bruce D. Hoechner joined Rogers in 2011 as President and CEO after 30 years at Rohm and Haas, a leading global specialty chemicals company. Rogers was at a pivotal point as it looked forward into the 21st century. Bruce provided the right mix of executive leadership, global experience and strategic foresight to lead Rogers toward what it could be. The cornerstones of his strategy were clearly communicated and skillfully implemented: market-driven, innovation-led, synergistic acquisitions and operational excellence. His tenure represented a period of historic company growth and performance.

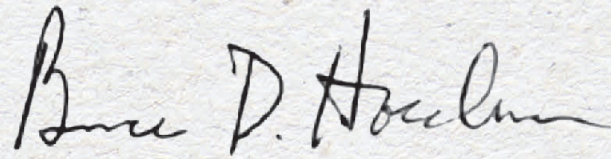


Above: Bruce D. Hoechner



Above: Bruce D. Hoechner giving a presentation about Rogers technology solutions for advanced mobility applications.





Bruce D. Hoechner

Bruce D. Hoechner grew up in northern New Jersey and always had an affinity for business. Whether it was delivering newspapers or painting houses, many of his early business experiences helped him recognize the criticality of building and nurturing strong relationships and delivering what was promised. He also enjoyed challenges. In his early teens, he co-piloted for his father on many single engine airplane trips around the United States.

He later followed in his father's footsteps, receiving his engineering degree from Penn State University. Immediately out of college, Bruce joined Rohm and Haas, a leading global specialty chemicals company, where he would hone his global business skills for more than 30 years.

While engineering opened the door at Rohm and Haas, Bruce quickly pivoted to operations, marketing and commercial roles where he excelled. "I enjoy identifying opportunities, working with teams to achieve solutions and then working with customers to demonstrate value and drive significant growth," he said. This led to consistent career progression that included leadership roles in the United States, as well as China, Thailand and other Asian countries.

Bruce's leadership skills and relevant business experience were a perfect fit for Rogers when he joined the company as its President and CEO in 2011, particularly as Rogers was navigating the significant expansion in Europe and growing opportunities in China. "Bruce is full of thoughts and ideas and was so enthusiastic about what Rogers could be," remembers Bill Mitchell, a former Rogers Board member.

Bruce recognized the history of Rogers, as well as its future opportunities, and he made changes that respected both which led to an extended period of improved growth and profitability. Some of these changes were difficult but necessary, like moving Rogers' headquarters from its historic home in northeastern Connecticut in 2017. The strategic rationale for the move was clearly understood, and the company maintained a continuing presence in the northeast Connecticut area including its EMS headquarters. Plus, Rogers moved to a familiar location, Chandler, Arizona, where it was already a respected manufacturing leader with a 50-year history.

Rogers achieved historic growth and performance during Bruce's tenure, and he led the strategic foundation for the company's future in electric vehicles, autonomous driving, telecommunications and clean energy. However, he will perhaps be remembered more by employees for his collaborative leadership style and contagious enthusiasm. He shared toasts with Chinese employees at each of the over 50 tables at the company's annual New Year party in Suzhou, sang karaoke (mostly Bruce Springsteen songs) with colleagues at Rogers' Global Leadership Conference and in Europe reveled in sharing many enjoyable dining experiences with colleagues long into the evening. "It has been a tremendous professional honor to work with the men and women of Rogers," commented Bruce. "Their talent, commitment and integrity make Rogers a special place, and I'm proud of what we are accomplishing together."





# 2011

Rogers acquires curamik® Electronics, the worldwide leader for the development and production of direct copper bonded ceramic substrate products.



Above: A ticket to the Rogers ACMD Suzhou, China, grand opening celebration on April 13, 2011.

# INNOVA







# Rogers: A Winning Strategy

The secret to Rogers' success in the 2000s? A winning roadmap built on four strategic pillars:

**Market-Driven:** Driving deeper partnerships with customers through cooperative innovation. As a result, Rogers identifies customer needs and targets ways to help customers win in a competitive market.

**Innovation Leadership:** Working with university researchers and Rogers' Research & Development teams to accelerate development of new technologies to solve market challenges.

**Synergistic Mergers and Acquisitions:** Augmenting growth by merging with and acquiring companies that are industry leaders. These are businesses with market and technology leadership, highly engineered applications, differentiated offerings and an attractive financial profiles.

**Operational Excellence:** Improving profitability by using continuous improvement methodologies like Six Sigma and Lean. This also includes optimizing the company's global footprint and improving manufacturing operations, productivity and yields through automation.

Above: Cover of Rogers Corporation 2014 Annual Report.



# 2014

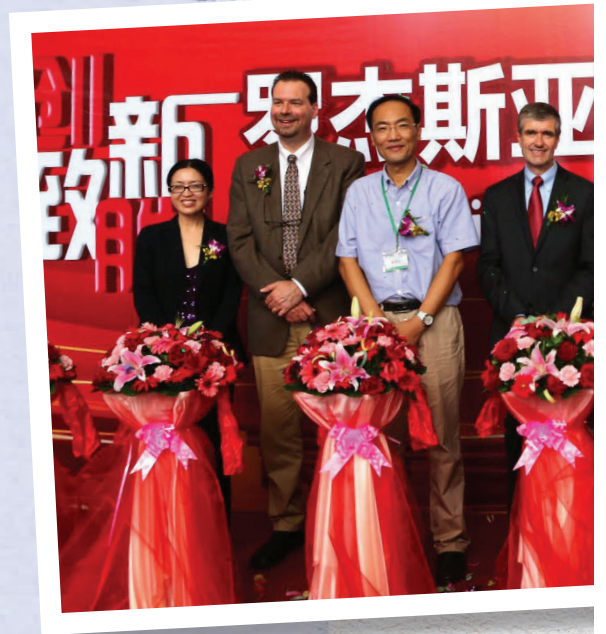
Rogers celebrates the grand opening of the Innovation Center, located in Burlington, Massachusetts, in partnership with Northeastern University. The Innovation Center is a unique academic-industry partnership focused on building closer linkages between academic research, industry know-how and commercialization of research.



## Rogers' Innovation Centers

Finding knowledgeable, talented people who understand the complexities of materials can be challenging. To address this ongoing issue, Rogers established cost-effective Innovation Centers in multiple regions to encourage close collaboration with universities and other technology partners. Together, these teams work to identify new-to-the-world solutions that align with Rogers' key growth drivers.

- 2014** Innovation Center, Burlington, Massachusetts
- 2015** Asia Innovation Center, Suzhou, China
- 2017** Innovation Center – West, Chandler, Arizona
- 2021** Platform Innovation Center, Eschenbach, Germany



Above: Grand opening celebration of the Rogers Asia Innovation Center in Suzhou, China.

Left: Innovation Center, Burlington, MA.



# 2015

In Obergefell v. Hodges, the United States Supreme Court rules that all states must recognize same sex marriages.

Rogers acquires ARLON® circuit materials and engineered silicones.

Rogers celebrates the grand opening of the Rogers Asia Innovation Center in Suzhou, China.

# 2016

Rogers acquires DeWAL®, a family-owned Rhode Island company.

Pokemon Go is all the rage. The Chandler, Arizona, location (formerly the DUREL plant) is a Pokemon Stop. ROG, the Rogers ACS (Advanced Connectivity Solutions) mascot, is the image used in the game.

Left: Rogers acquires DeWAL® industries, expanding into high performance polymer films and pressure sensitive tapes.



Left: Rogers President and CEO, Bruce D. Hoechner cuts ribbon at the grand opening of the Innovation Center in Burlington, MA.





## Rogers Secret Sauce

Where will you find Rogers? In applications that require the most reliable, high performing materials. Rogers isn't the least expensive option, but customers know they can rely on Rogers materials to perform better than most alternatives. They also know that when they work with Rogers employees, they are working with some of the best minds in the industry.

Rogers "engineer-to-engineer" relationships are essential to our customers. The "secret sauce" is what our engineers bring to the relationship: applications expertise. Not only are Rogers engineers technical experts on Rogers' materials and their customers' materials, but they are also experts in the applications where the technology is used. This is an invaluable advantage for Rogers customers and a point of pride for Rogers employees.

Materials  
Technology  
Expertise  
Advantage  
Relationships  
Engineers



# 2017

Rogers moves its global headquarters to Chandler, Arizona, but many corporate employees continue to work out of the Connecticut office. The move supports Rogers' long-term strategy and is an integral part of its plans for growth and expansion. "Relocating our company headquarters to Arizona improves our access to the growing business and technology centers on the West Coast," said Bruce D. Hoechner, President and CEO.

Rogers acquires Diversified Silicone Products, Inc., a manufacturer of silicone sheet, extrusions, stripping and compounds.

Rogers celebrates the grand opening of the Innovation Center - West in Chandler, Arizona.





Rogers executives ring the closing bell on the New York Stock Exchange, celebrating the company's 185th year.



# 2018

Rogers acquires Griswold, LLC., a leading manufacturer of custom-engineered cellular elastomer and high-performance polyurethane.



# Rogers Asia Expansion

Rogers Japan Inc.  
opens in Tokyo, Japan

Rogers Shanghai,  
China, office opens

Rogers Singapore Inc.  
launches in Industrial Estate,  
Singapore

Rogers Korea Inc. opens in  
Dongan-gu, Gyeonggi-do,  
Korea

Rogers Suzhou Campus  
and Regional Headquarters  
in Suzhou, China open

1984

2000

2003

2005

1998

2002

2004

2008

Rogers Technology  
(Suzhou) Co., Ltd.  
opns in Suzhou, China

ECD opens in Suzhou,  
China

Rogers opens its  
Beijing, China,  
office

Rogers Taiwan Inc.  
opens in New Taipei City,  
Taiwan

PES-ROLINX® Busbar, opens in  
Suzhou, China

Rogers Inoac Suzhou  
Corporation, Suzhou, China





EMS-Molded PORON®  
Manufacturing  
launches in Suzhou,  
China

Utis (EMS) Facility and  
Office in Ansan-si,  
Gyeonggi-do, Korea,  
opens

ACS in Suzhou,  
China, West opens

Asia Innovation Center  
in Suzhou, China opens

EMS eSorba® Line Setup  
launches in Suzhou, China

Suzhou Advanced  
Materials Technology  
(Suzhou) Co., Ltd. opens in  
Suzhou, China, North

2010

2015

2019

2021

2011

2018

2020

2022

Launch of ACS-Rogers  
Suzhou, China, East

Completion of PES-  
ROLINX® Suzhou  
Expansion  
Suzhou, China

PES-curamik® Products  
Final Inspection  
launches in Suzhou,  
China

EMS BISCO® Line-  
Investment  
Signing Ceremony  
is held in Suzhou,  
China



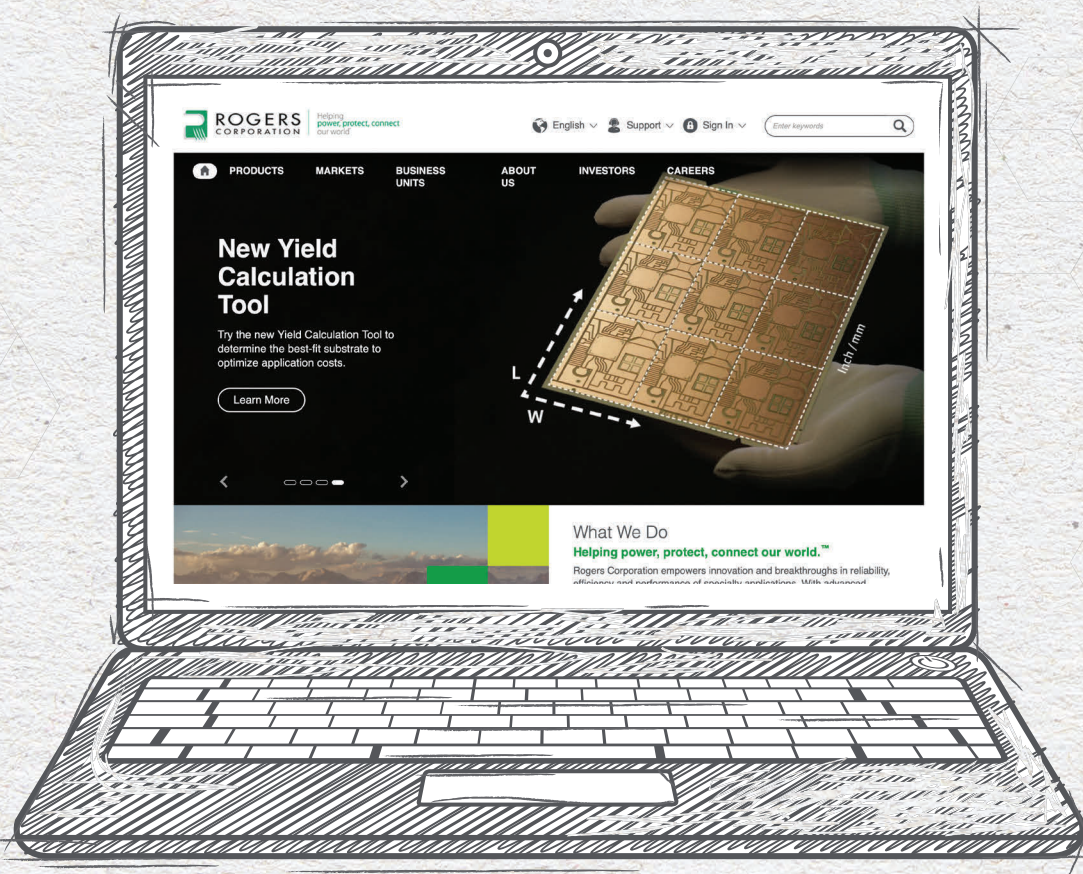
# 2019

The all-new redesigned Rogers Corporation website launches: RogersCorp.com

Rogers launches PORON® SlimGrip Plus Foam, the softest PORON® material to date with increased cohesive strength for ease of processing. The high level of compressibility and superior compression set resistance make this an ideal product for sealing applications with low compression set requirements.

Rogers launches RO3003G2® next-generation laminates for automotive radar sensor applications.

Rogers introduces Griswold® FlameSafe®, the industry's first family of open-cell sponge products to meet UL HBF flame-resistance rating.





## Rogers Corporation at a Glance

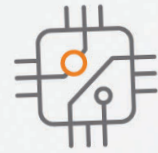
### Core Business



Advanced  
Connectivity  
Solutions



Elastomeric  
Material  
Solutions



Power  
Electronics  
Solutions

The company reports 2019 net sales of \$898.3 million, a 2.2% increase compared to 2018 net sales of \$879.1 million.

On December 31, the government in Wuhan, China, confirm treating dozens of cases of pneumonia from an unknown cause. Within days, researchers identify a new virus. January 11, 2020, marks the first confirmed death in the country.

# 2020

The COVID-19 pandemic spreads in China. Rogers suspends operations and creates safety protocols to keep employees safe. On February 10, Rogers' Suzhou factories resume production, reaching full production capacity by the end of the month. In February and March, as the virus spreads across Europe and then the U.S., the company follows the China blueprint and implements the same safety protocols companywide.

The first confirmed case of COVID-19 in the U.S. is reported on January 11. By January 30, the World Health Organization declares the virus a global health emergency.



# Resilience Amid Challenges

Rogers was founded amid a cholera epidemic. It weathered the American Civil War, Spanish Flu, two World Wars, regional conflicts, the Great Depression, a devastating flood and more. Keeping employees safe and cared for has always been front of mind for company leadership, but Rogers has also felt a responsibility to step in to fill community needs. Working together to protect each other and serve customers throughout the company's 190 years exemplifies Rogers' long history of perseverance and resiliency.

COVID-19 is one of the most recent challenges presented. In February 2020, when the pandemic reached Suzhou, Rogers suspended operations across the large campus and mandated that office-based employees work from home. A plan that prioritized the safety and well-being of employees was put into place. By mid-February production resumed, reaching full production capacity by early March—just when the pandemic began to affect U.S. and Europe operations.

Rogers implemented myriad safety measures, including social distancing (six feet between people), travel bans, remote work arrangements, mandatory personal protective equipment usage, enhancements to plant hygiene processes, flexibility in attendance, extension of employee benefits for those who became ill, monetary support for employees to care for primary dependents (including childcare coverage) and incentives for vaccinations when they became available. Interruption to operations in the U.S. and Europe occurred later in March, and these same safety measures were expanded to include all Rogers' operational sites. As the virus matured and new variants such as Delta and Omicron emerged, Rogers continually monitored best practices and updated safety protocols as needed.

Battling the pandemic from within the company was only one of the challenges caused by the virus—Rogers products were also at the forefront of the global fight. Rogers gaskets are essential parts of ventilators used in hospitals. The







Top: Rogers employee Joelle Cayer, Process Engineer, in the Roosevelt facility in Chandler, AZ.

Top, right: Rogers "Live Safely" COVID Preventative Measures Poster.

Above: Ed Slotter, shipping clerk in Narragansett, Rhode Island, 3D-printed surgical mask strap tension relievers at night during the COVID-19 pandemic on his personal 3D printer for fellow employees.



Your health and safety are our #1 priority.  
The actions we are taking include:

-  - Asking employees and visitors to wear a mask covering their nose and mouth
-  - Screening the health of our suppliers, employees and visitors
-  - Providing personal protective equipment for employees
-  - Screening workers for fever (over 100.4° F), cough or shortness of breath
-  - Maintaining the six-foot physical distancing requirements for employees and visitors
-  - Disinfecting common areas regularly, including high-touch surfaces
-  - Refraining from physical contact and limiting shared tools or spaces
-  - Providing disinfectant and sanitation products for workers to clean their workspace and equipment
-  - Making hand sanitizers, disinfecting wipes and soap and water readily available to employees and visitors
-  - Requiring workers who exhibit symptoms of COVID-19 to stay home or seek medical attention

Thank you for Practicing Our  
COVID-19 Preventative Measures

company's elastomeric materials are found in COVID-19 test kits for the medical field. Wired and wireless technologies, critical to communication during the pandemic, rely on Rogers technologies. Even commercial and consumer refrigerators, important for keeping vaccines from spoiling, use power modules manufactured from Rogers materials. In addition, new PORON® and BISCO® materials became essential to preserving and protecting sensitive products at a multitude of temperature levels throughout the cold storage supply chain.

Caring for employees and serving the community demonstrates the ethics and integrity at the core of Rogers Corporation, then and now.

*"We have some very smart people, and when the pressure is on, we find ways of getting through it."*

—Colin Gouveia, President and CEO



While the pandemic continues to test our mettle, I'm pleased to report that Rogers employees are a determined team. Together, we are exhibiting the best of Rogers, doing what needs to be done to protect each other and serve our customers. The following are several examples:

- At the height of the outbreak on the East Coast, a sales engineer in Connecticut donned protective gear to spend two days on our customer's manufacturing floor, hand-sorting gaskets for use in ventilators manufactured by a major U.S. auto manufacturer.
- In January, an engineer in Arizona recognized the gravity of the COVID-19 outbreak and the likelihood that it would spread globally. He took it upon himself to order a case of N95 masks, at his own expense, to protect his colleagues and family during the onset of the virus in the U.S.
- In China, select employees worked through the Lunar New Year and Spring Festival celebration, taking on additional responsibilities for colleagues who were quarantined.

This perseverance is a trait that has been a part of Rogers' DNA for nearly two centuries. In 1832, Peter Rogers established his eponymous paper company in a two-story powder mill in Manchester, Connecticut. At the time, the U.S. and Europe were in the midst of a cholera epidemic. Since then, Rogers Corporation has seen the American Civil War, the Spanish Flu, two World Wars, regional conflicts, major revolutions, the Great Depression and much, much more. Through it all, we have demonstrated our ability to weather global challenges and emerge stronger. I invite you to celebrate Rogers' history by visiting our recently launched interactive timeline.

Now we are preparing for our Europe and U.S. remote staff to eventually return to our offices. Our plans for the office environment are very conservative, and our return will occur in phases. Visitor restrictions to our facilities will continue and international travel, while allowed, is extremely limited.

Our manufacturing employees have been in our plants throughout the pandemic and have done a great job of adapting to our COVID-19 safety protocols. To date, we have not experienced any major supply chain disruptions and continue to be an essential manufacturer serving critical industries.

As we look forward, we will continue to prioritize employee health while maintaining business continuity. Our focus is on Rogers' long-term success and ensuring we emerge from this crisis prepared to capture the opportunities we believe lie ahead.

We have watched with tremendous sadness as the events of recent weeks have shaken the U.S. As an international company, Rogers has always celebrated the diversity of our workforce. We want everyone, regardless of race, ethnicity, class, gender, age, religion, sexual orientation or background to feel safe – physically and emotionally – coming to work. I have asked our supervisors and managers to make it a point to check-in on their colleagues and support any needs their team may have during this turbulent time.

I want to thank our determined and dedicated Rogers teams across the globe. Despite the uncertainty brought by the coronavirus pandemic, they have remained focused and steadfast to help the company deliver results. I also want to recognize our customers for their loyalty, our suppliers for their partnership and local authorities for their guidance and insight.

Please, stay safe and stay healthy.

Bruce D. Hoehner,  
President & CEO, Rogers Corporation



Above: Letter from Rogers President & CEO Bruce D. Hoehner during the 2020 COVID-19 pandemic.

Left: Employees Will Hooke, a Six Sigma Black Belt II, talks with Mike Costello, Senior Principal Engineer.



# 2021

A fire causes extensive damage to the UTIS manufacturing facility in Ansan, South Korea. All employees are safely evacuated.

Rogers releases its first Environmental, Social and Governance (ESG) Report as a blueprint for business ethics and responsible stewardship.

Left: A Rogers employee conducts quality control on dielectric paper.

*"Ever since our founder's son, Henry Rogers, developed a process to remove dye from paper - enabling the paper to be recycled - sustainability has been rooted at the core of Rogers. Today, we supply our advanced materials for leading-edge technologies including electric and hybrid electric vehicles that reduce CO2 emissions; advanced driver assistance systems that improve automotive safety and enable autonomous vehicles; renewable energy applications that deliver clean energy solutions; and medical applications that protect the health of our frontline workers. We are dedicated to reducing our environmental impact as we strive to enable a cleaner, safer and more connected world."*

—Bruce D. Hoechner, President and CEO (Ret.)



# “Results, but Results the Right Way”

Rogers has always been committed to responsible corporate citizenship that fosters a culture of respect built on the ethical foundation of a Code of Business Ethics and commitment to “Results, but Results the Right Way.”

The company and its people—globally and locally, through companywide programs and individual initiatives—have pursued the highest standards of business ethics and responsible stewardship as part of its business operations and strategy.

In 2020, Rogers intensified its commitment by consolidating environment, social and governance (ESG) activities under a new committee with participants from Legal, Human Resources, Compliance, Environmental Health and Safety, Investor Relations, Research & Development and Operations and Corporate Communications departments. The goal was to ensure everyone in the company had a voice in how Rogers addresses ESG concerns.

Rogers’ first Environmental, Social and Governance (ESG) Report, published in 2021, reinforced the company’s commitment to three key areas:

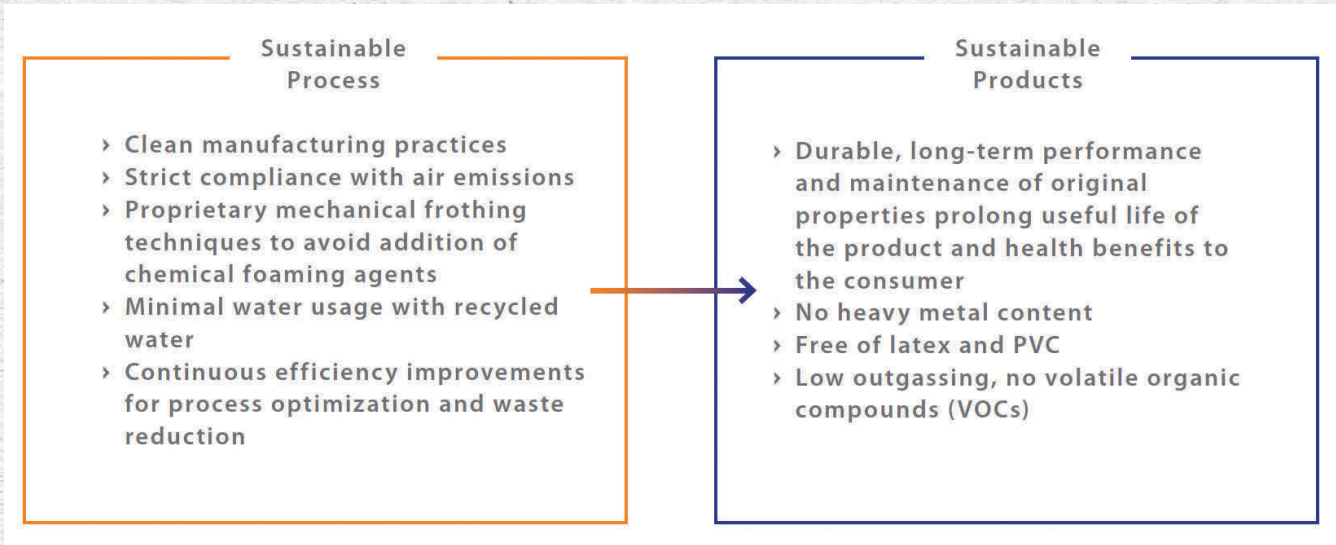
## Protecting the Environment

Rogers’ commitment to the environment includes designing products for sustainability and manufacturing with a focus on continually reducing the company’s environmental impact. The advanced material products made by Rogers withstand the most demanding applications. This allows customers to advance energy efficiency and safety. For example, Rogers materials are found in electric vehicles/hybrid electric vehicles (EV/HEV) and renewable energy and Advanced Driver Assistance Systems (ADAS) applications. Rogers is also mindful of the environmental impact of its operational footprint, particularly as it relates to climate emissions and water.

## Sustainability by Design







**Social Responsibility**

Being socially responsible the Rogers way means supporting the well-being and professional development of employees and contributing to the communities in which the company operates. This includes the full employment experience, starting with health, safety and ethics and extending to employee engagement, diversity, equity and inclusion and professional development. The Rogers employee-centric approach embeds accountability into the management structure and an expectation of continuous improvement in manufacturing operations. This commitment extends to the local communities shared with employees and global neighbors.

**Governance**

Corporate governance at Rogers starts with a Code of Business Ethics, the cornerstone for the way the company does business and the framework for operations. All decisions are consistent with requirements of applicable laws and the best interests of the company and its stakeholders.

**Safety:**

Everyone, Everywhere, Every Day

**Ethics and Integrity:**

Results, but results the right way

**Investing in Employees:**

Supporting and empowering employees in personal development and career growth

**Diversity, Equity and Inclusion:**

Fostering respect for all employees and customers

**Community and Global Impact:**

A positive impact on communities, especially in times of need



# 2021

Rogers launches ultra-thin PORON® AquaPro® 37 formula, an ideal material for sealing smart phones, laptops, tablets and smart wearable devices against water ingress. "The addition of PORON® AquaPro® 37TS9 to the AquaPro® product line is of great benefit to manufacturers of smart devices," said Stephanie Zhang, Market Segment Manager for Rogers Corporation's Elastomeric Material Solutions business. "With water sealing properties superior to other grades of PORON® material, AquaPro® 37TS9 has the ability to safeguard and protect sensitive electronic components from both water ingress and impact."

Right: Rogers PORON® AquaPro® product samples.



Rogers acquires Silicone Engineering Ltd., a leading European manufacturer of silicone material solutions based in Lancashire, United Kingdom. Silicone Engineering expands Rogers' existing advanced silicones platform and provides Rogers a European center of excellence to service customers.

In November, DuPont announces its intent to acquire Rogers in an all-cash transaction that values Rogers at approximately \$5.2 billion.

Right: The Rogers team in Bear, Delaware, during a safety stand-down day. Safety is a top "Cultural Behavior" at Rogers.







# Rogers: Driving the Future

Since the 1950s, Rogers has been providing solutions for many applications for the automotive industry that meet or exceed safety specifications and standards. In the last decade, Rogers has gained a reputation for its advanced materials for hybrid and electric cars, advanced driver assistance systems (ADAS), autonomous driving capabilities and other applications in the automotive and EV/HEV market. Sales of electric cars doubled in 2021 and it's expected that 20.6 million of these vehicles will be on the road by 2025—thanks in no small part to technology and materials developed by Rogers. Intentionality along with a focus on safety, reliability and innovation has contributed to the success of Rogers products in energy-efficient motor drives.

"One of the more interesting applications that we've developed is for cell to cell pressure management, or polyurethane and silicone foams that maintain consistent pressure over the lifetime of a vehicle," explained Chris Churchill, Senior Manager, Technical Services. "What this means is that our products prolong battery life which subsequently improves range and reliability."

The technology was developed back in 2010 for the original Chevy Volt from General Motors. In 2022, Rogers launched ProCell-350, a high performance material for EV battery packs that extends battery range and optimizes performance while meeting safety standards.

Said Churchill, "The outlook for the advanced mobility part of Rogers' business is encouraging with double digit growth rates projected for the foreseeable future."

## EV BATTERY PACK DESIGN CHALLENGES

EV battery packs present numerous challenges for design engineers looking to achieve safety targets and minimizing complexity, volume, and weight. Rogers helps to improve and optimize battery pack performance by rapidly developing critical and critical to each EV program.

### Space Constraints

- Tighter tolerance for thickness and CFD

### Assembly Automation

- Meets tackiness requirement for optimal cell stack assembly automation

### Battery Safety

- Thermal propagation delay is critical to high-powered next gen cells
- While V0 may not be the biggest driver, flammability is still a key consideration

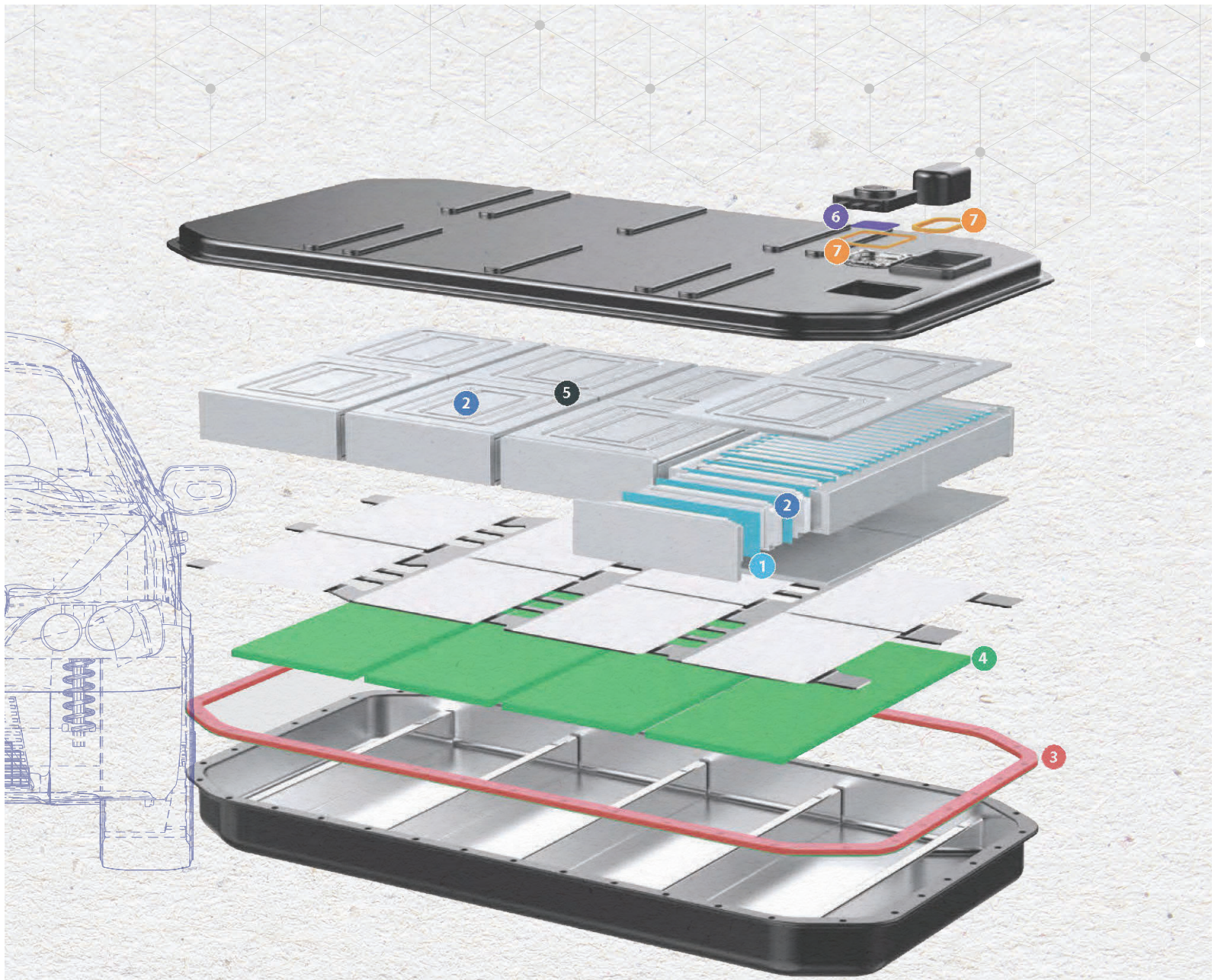
### Packaging/Weight

- Meets BOL and EOL compression force needs with a maximum usable range that minimizes incompressible space

### Long Term Performance

- Low compression set
- Uniformity of CFD curve over battery lifespan
- Optimization of charge/discharge cycles to increase efficiencies and the lifespan of the battery





## EV BATTERY PACK SOLUTIONS

### CHALLENGES

Looking for ways to extend range while maintaining performance. Rogers partners with OEMs and Tiers 1 to provide custom material solutions unique to each application.



- 1 Battery Compression Pads**  
 PORON® and BISCO® Materials Provide Consistent Push Back Force to Optimize Battery Cell Life and Performance
- 2 Thermal Propagation Pads**  
 ProCell™ Firewall Materials Offer a 2-in-1 Solution that Provides Cell-Level Thermal Propagation Protection and Compression Management
- 3 Battery Pack / Environmental Seal**  
 BISCO® Material Delivers Extreme, Long-Term Protection Against Environmental Elements While Allowing the Pack, Module, and/or Electronics Compartments to be Serviced Over the Life of the Battery/Vehicle
- 4 Cooling Plate Cushion Pads**  
 PORON® and BISCO® Materials Provide Consistent Push Back Force over the Long-Term, Insuring Cooling Plate Contact with the Battery Elements for Proper Functioning of the Thermal System
- 5 BMS and Sensor Spring Pads**  
 PORON® and BISCO® Materials Offer Protection from Vibration and Provide a Consistent Force that Helps to Maintain Proper Functioning of Sensors and Flexible Printed Circuit Boards
- 6 Venting Film**  
 DeWAL® Venting Membranes are Engineered to Vent and Protect a Wide Range of Critical Enclosure Applications. ePTFE Venting Membranes Allow for Enhanced Heat and Air Ventilation, while Burst Vents Enable Quick Evaluation of Heat and Pressure. Critical to all Thermal Runaway Protection Systems
- 7 High-Voltage Sealing Gasket**  
 BISCO® Material is a Reliable and Reworkable Solution for Sockets, Manual Service Disconnects as well as Venting Cap Sealing



# Rogers Global Locations



**15** global manufacturing facilities in 11 locations

## Advanced Electronics Solutions RF Solutions Laminates and 3D Printable Materials

- 92ML™ Materials
- AD Series® Laminates
- CLTE Series® Laminates
- CuClad® Series
- DiClad® Series Laminates
- IM Series™ Laminates
- IsoClad® Series Laminates
- Kappa® 438 Laminates
- MAGTRES® Laminates
- Radix™ Printable Dielectric
- RO3000® Series
- RO4000® Series
- RT/duroid® Laminates
- TC Series® Laminates
- TMM® Laminates
- XtremeSpeed™ RO1200™ Series

## RF Solutions Prepregs/Bondplys

- Prepregs and Bondplys

## Busbar Solutions

- ROLINX® Busbars

## Ceramic Substrates

- Substrate Metallized Ceramic

## Coolers

- curamik® Cooling Solutions

## Elastomeric Material Solutions

### Thermal Propagation Delay Materials

- ProCell™ EV Firewall

### Polyurethane Materials

- PORON® Industrial Polyurethanes
- PORON® Medical Polyurethanes
- PORON® Comfort
- XRD® Impact





**Specialty Silicone Materials**

- ARLON® Silicones
- BISCO® Silicones

**PTFE, UHMW & Pressure Sensitive Tapes**

- DeWAL® Products

**Engineered Cellular Rubber**

- Griswold™ Rubber

**Flexographic Printing Cushions**

- R/bak® Cushion Mounting Materials

**Elastomer Components**

- ENDUR® Components
- Nitrophyl® NBR Floats





## Chapter 7

# Rogers: Meeting the Needs of a Changing World

(2022 and Beyond)

Rogers has triumphed in dynamic, highly competitive markets for 190 years and, through its hard work, creativity and resilience, is now once again poised for historic success. The company has, over the last decade, established a solid strategic foundation, improved its operational capabilities, expanded its product portfolio and developed new technologies for the future. But, as always, Rogers' success will be driven by its talented employees, who have the technical expertise, deep customer relationships and innovative applied material science capabilities to continue to solve some of the most challenging problems of the new millennium.

"Rogers is a smaller company, but we have always been recognized as a market leader and our reputation is known around the world," explains Bruce Hoechner, Rogers' former President and CEO. "We have an exciting journey ahead of us. It has been an honor to be part of such a dedicated team that is shaping the future."

In 2023, Rogers turned another page in its history, appointing Colin Gouveia to serve as its new President and CEO, replacing Bruce Hoechner who retired at the end of 2022. Formerly





Above: Getting ready for the opening of the Rogers Suzhou North Site. Employees from left to right: James Wang, Plant Manager; Tony Shen, Senior Facility and Maintenance Manager; Jerry Zhu, Senior Global PEX Manager

the Senior Vice President and General Manager of Rogers' Elastomeric Material Solutions (EMS) business unit, Colin is well known to Rogers employees and customers. Colin has three decades of experience in the specialty chemical and materials manufacturing industries, having worked for Eastman Chemical, Dow Chemical Company, Rohm and Haas Company and Imperial Chemical Industries (ICI). "Colin is a natural fit and his appointment is the culmination of the Rogers Board of Directors' long-term CEO succession planning process," said Peter Wallace, Board Chairman. "We have a proven leader in Colin and full faith that he will help us take full advantage of fast-growing markets."

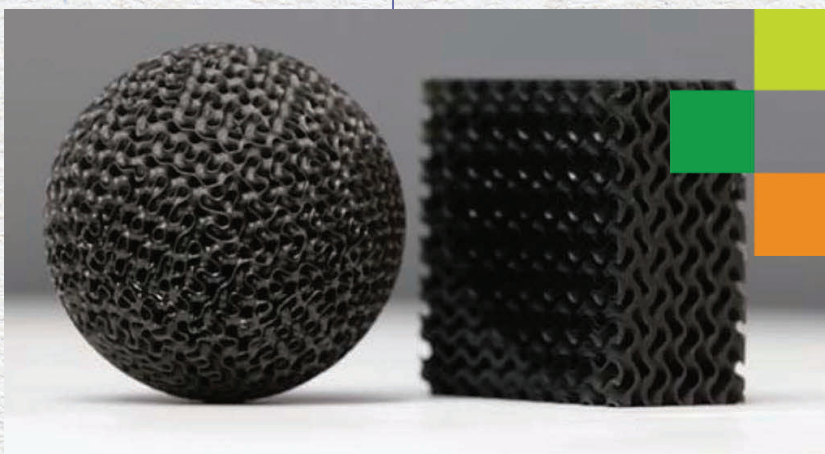
"Looking ahead, I intend to lead with an optimistic outlook and foster an innovative and collaborative culture," said Colin. "We will continue to focus on serving our customers with the best-in-class solutions they expect from us. Additionally, we are incredibly well positioned to enhance our competitive differentiation, build momentum and accelerate growth across our business and deliver value for all of our stakeholders. Rogers is an exceptional company with a strong foundation and exciting prospects for future growth. I look forward to working together with all of Rogers as we empower tomorrow's technology with our innovative solutions."



# 2022

Radix™ Printable Dielectrics is introduced as a composite material for high-resolution 3D-printing for end-use RF dielectric component manufacturing.

Right: Rogers Radix™ Printable Dielectrics product samples.



PORON® 92L is launched as the latest material addition to the PORON® 4790-92 family of extra soft, slow rebound polyurethane foams.



Right: Rogers PORON® 92L product samples.



Rogers Corporation becomes a partner in the European Union's Horizon Europe innovation program through the POWERDRIVE project to power electronics optimization for next-generation electric vehicle components.

## POWER DRIVE

A year after it was announced, the proposed transaction with DuPont is terminated due to a lack of regulatory approval from China. Rogers remains a successful, stand-alone company with a strong competitive position innovating across fast-growing markets.



Above: Colin Gouveia  
President and CEO.

## 2023

Colin Gouveia becomes CEO as Bruce Hoechner retires at the end of 2022. "Exciting things are ahead for Rogers," said Colin. "I am confident that through our innovative and collaborative culture, Rogers will continue to serve customers with the best-in-class solutions they expect from us."





WE ARE  
**ROGERS**



In November 2022, a year after it was announced, the proposed transaction with DuPont was terminated. Once again, Rogers employees united! Together, we look forward to our future as a successful standalone company with strong competitive positioning, innovating across fast-growing markets. We Are Rogers!



Below: Rogers employees from left to right: Athena Pena, Production Supervisor; Mike Orfitelli, Manager, EHS; Luke Labonte, Production Supervisor at leadership training event.

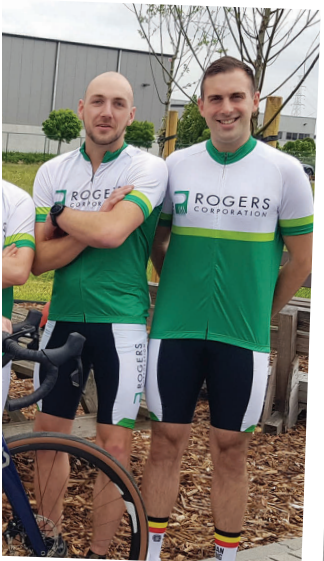
Above: EMS employees doing some teambuilding at their sales meeting. Front row, left to right: Emily Harris, Demand Planner; Alex Cox, Sales Engineer; Brian Ninness, Director of Marketing  
Back row, left to right: Dan Kubick Technical Service Engineer; Ray Patrylak, Application Development Manager; Breanna Boyden, Market Development Manager; Justin Chretien, Production Manager



Right: Dan Emery, Goshen Die Cutting; Mike Brodeur, Rogers Senior Web Developer; Dan Hurrell, Marian Milwaukee; and John Polyak, Rogers Sales Engineer at the Preferred Converters Conference in Texas in 2014.







Left: Rogers Belgium cycling team for the 1000 km for charity against cancer. From left to right: Steven Vandenaabee, Senior Manager Process and Equipment Improvement; Tim Bostyn, Director, Finance; Ben Backx, Network Analyst; Joris Tielemans, Administrative Assistant; Thomas Rijk, Maintenance Technician; and Jens Van De Voorde, EHS Engineer




Above: Rogers Young Talents Advanced Electronics Champions. From left to right: Johannes Beierl, Training Manager; Jonas Fuhrich, Production Technician; Felix Thaller, Production Technician; and Johannes Stroessner, Maintenance Technician



Above: Asia Leadership Team at Suzhou North grand opening in 2022. Team members from left to right: Ben Shi, Director, Application Development and Sales; Roger Leng, Sr. Manager Operations Development; Tingting Huang (Guest); Vincent Weng, Sr. Manager Plant Operations; Kate Wang, Asia General Counsel; Steven Yang, Sr. Manager EHS; Grace Gu, Director Human Resources; Chris Chen, Business Manager; Wu Lie (Guest), Leo Li, Sr. Manager Programmers; James Wang, RIS Plant Manager; Zhengwei Jin (Guest), Jerry Zhu, Sr. Manager Process Excellence; Jerry Wang, Sr. Manager Procurement; Tony Shen, Sr. Manager Facilities and Maintenance; Steven Zhang, Manager Operations





*"Rogers has a remarkable business history spanning nearly two centuries. The company has weathered pandemics, financial crises and world wars, and met these challenges with innovation, diligence and integrity. Rogers reinvented itself many times over the years, enabling the future, first for paper manufacturing, then in electrical infrastructure, space exploration, mobile communications, and now electric vehicles. I am proud to be a Rogers employee and share this common bond with my colleagues across the globe who have contributed to Rogers' success and proud heritage."*

—Colin Gouveia  
President and CEO

**A Special Thank You to the 2021-2022  
Rogers Board of Directors**

Bruce D. Hoechner, Keith L. Barnes, Megan Faust,  
Carol R. Jensen, Keith Larson, Ganesh Moorthy,  
Jeffrey J. Owens, Helene Simonet, Peter C. Wallace