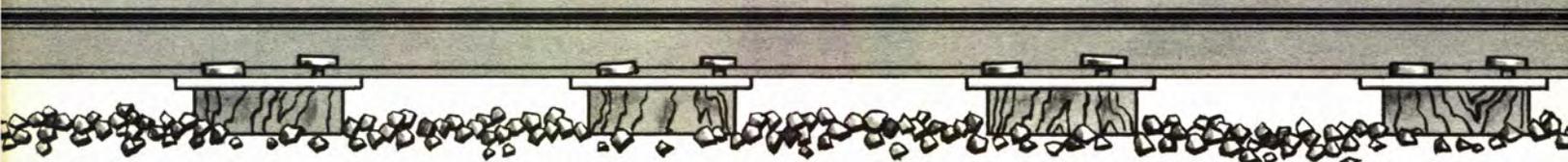


POWER FOR PROGRESS



GENERAL  ELECTRIC



RAILROADS are the key to sound, modern transportation systems. Reflected in their shining steel rails that cross countries and continents are the elements of progress: increased trade, economic expansion and prosperity. For the railway industry to make further contributions to progress, the development of more efficient locomotives must keep pace with an ever-growing network of steel rails, an ever-growing volume of traffic. Only with reliable, modern motive power can railways best transport the many raw materials and products that help build new industries, new communities, and a better way of life for people everywhere.



**This is a
General Electric story...
for railroading is a
vital area in which
progress is our most
important product.**



*Over the past 68 years,
the General Electric Company
has designed and built
more than 20,000 locomotives.*



Modern General Electric facilities contribute to locomotive progress

At the Locomotive & Car Equipment Department in Erie, Pennsylvania, on 2,000,000 square feet of floor space, in 12 major buildings, over 3,000 highly skilled people combine their abilities with specialized equipment to meet the need for modern motive power.

It is here in the Erie Plant that General Electric has continually researched, pioneered and developed the application of electric energy to transportation. It is here that higher standards of locomotive design have been realized, and from giant erecting bays have come the locomotives which so effectively serve a sound transportation system.

The Locomotive & Car Equipment Department is confident that the advantages inherent in diesel-electric and electric locomotives will contribute to even greater railroad progress in the future.



Locomotive specialists build dependable motive power



Research

RESEARCH scientists continually exploring basic concepts develop new applications of metals, chemicals, insulation, fuels and electricity. Photo shows test of armature coil designed to develop even greater service from dependable traction motors.



Development

DEVELOPMENT engineers devise new, more exacting techniques to increase performance of locomotives. Advanced diesel engine designs undergo exhaustive testing to assure maximum horsepower and reliability.

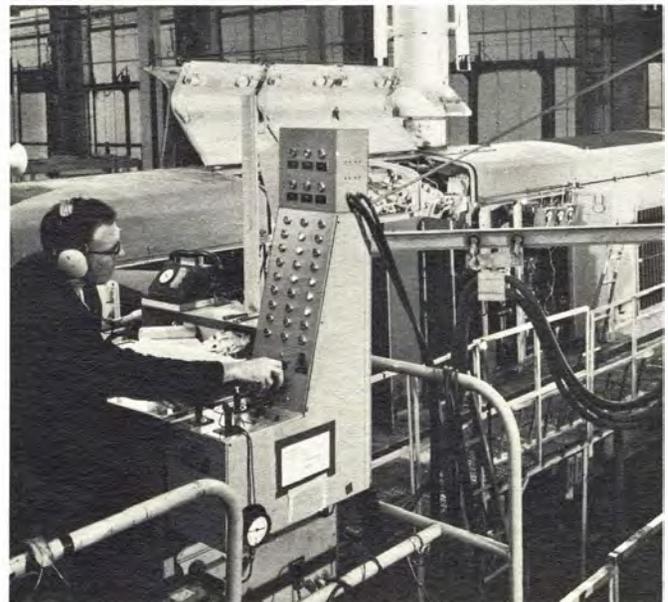
DESIGN engineers work with experienced draftsmen to relate the findings of research, weigh the new and the old, and translate their conclusions to blueprint stage. On row after row of drawing boards, the pattern is carefully established to meet the customers' needs.

TEST specialists put mechanical and electrical components through the rugged operating conditions encountered in actual service. In this way, equipment is proved both singly and in combination before actual installation in locomotives.



Design

Test



Scientists, engineers and skilled craftsmen are the key factors in the superiority of General Electric locomotives. Through their imagination, knowledge and individual skills they have made G.E. a leader in the development and manufacture of motive power.



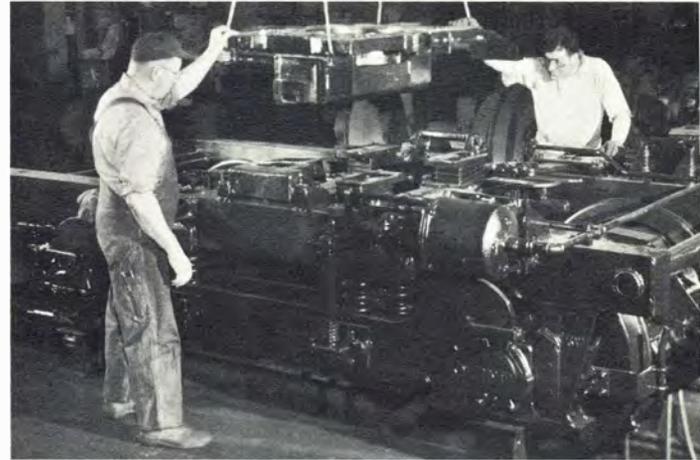
Inspection

INSPECTION during manufacture and throughout assembly by men trained in this specialty ensures that components meet the precise specifications necessary to meet exacting quality and performance standards. The powerful G-E traction motor being inspected here is an important part of sturdy, simple and reliable electric drive.

ASSEMBLY of this high-speed truck, an expertly-matched part of an integrated, smooth-riding locomotive, is carried out by a team of skilled workmen.

FINAL ASSEMBLY is directed, as are all steps along the production line, by experienced supervisors. They carefully oversee each operation until the locomotive chassis, complete in every detail including the customer's choice of colors, is gently lowered to the trucks.

TRACK TEST supervised by design engineers puts the finished locomotive through its paces. On the unique test track within the plant, any of nine different track gages are available to prove the performance of G-E locomotives before delivery.



Assembly

Track Test



Final Assembly



LESTONES IN G-E



1910—SUBWAY TRAIN



1902—ELECTRIC EXPORTED TO MANCHURIA



1935—HIGH-SPEED DIESEL ELECTRIC PASSENGER

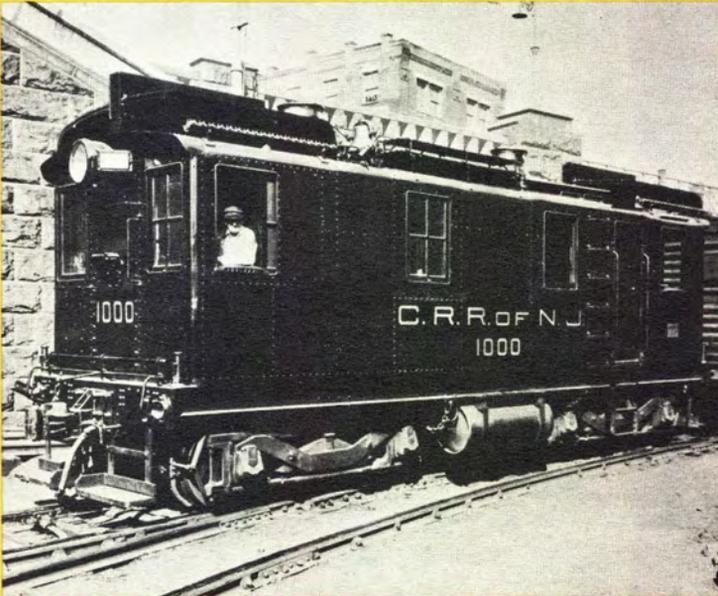


1935—DIESEL-ELECTRIC TO INDIA

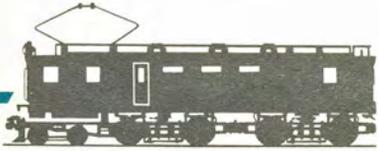


1937—STANDARD INDUSTRIAL DIESEL-ELECTRIC

1924... FIRST U. S. DIESEL-ELECTRIC



LOCOMOTIVE DE



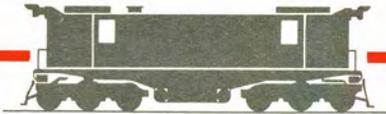
1915 — 3000 VOLT
ELECTRIFICATION



1921 — ELECTRIC LO
TO BRAZIL



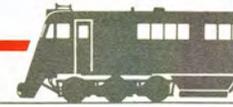
1948 — GAS TURBINE
ELECTRIC 4500 HP



1936 — 2000 HP SINGLE-ENGINE
DIESEL-ELECTRIC



1946 — NARROW GAUGE
DIESEL-ELECTRIC
TO BRAZIL



1949 — MAINLINE DIE
LOCOMOTIVE

INDUSTRIAL & MINING LOCOMOTIVES



UNDERGROUND
MINE
LOCOMOTIVES



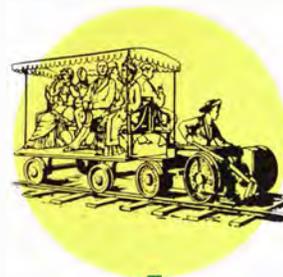
RIGID FRAME
INDUSTRIAL
LOCOMOTIVES



SWIVEL-
INDUST
LOCOMO

MOST POWERFUL
U. S. DIESEL-ELECTRIC...**1960**





1880 — EDISON ELECTRIC LOCOMOTIVE

MILESTONES IN G-E

SINCE 1892, just 12 years after Thomas A. Edison operated his first electric locomotive, General Electric has continuously pioneered developments and refinements in the application of electricity to rail transportation.

In 1895, General Electric put the first electric main-line locomotive into service on the Baltimore and Ohio Railroad; in 1906, the internal combustion engine was first applied to electric motive power in a gasoline-electric rail car; 1913 saw the first successful application of a gasoline-electric locomotive; in 1924 General Electric assembled the first practical diesel-electric locomotive, put into service in 1925.

The need for even greater horsepower than the diesel-electric could muster led in 1948 to the building of America's first gas turbine-electric locomotive. Today, 8500 hp gas turbine-electric locomotives are setting new performance records in long-haul, heavy-duty freight service.



1884 — ELECTRIC TROLLEY



1910 — SUBWAY TRAIN



1889 — MINE ELECTRIC LOCOMOTIVE



1895 — MAINLINE ELECTRIC



1898 — ELECTRIC EXPORTED TO GREAT BRITAIN



1902 — ELECTRIC EXPORTED TO MANCHURIA



1906 — GASOLINE-ELECTRIC RAIL CAR



1913 — GASOLINE-ELECTRIC LOCOMOTIVE



1925 — DIESEL-ELECTRIC LOCOMOTIVE



1928 — SINGLE UNIT DIESEL-ELECTRIC FREIGHT



1935 — HIGH-SPEED DIESEL ELECTRIC PASSENGER



1929 — PANAMA DIESEL-ELECTRIC FOR CHIRIQUI LAND CO.



1935 — DIESEL-ELECTRIC TO INDIA



1937 — STANDARD INDUSTRIAL DIESEL-ELECTRIC

Whether the motive power specifications are for greater horsepower, lower maintenance, special duty cycle or unusual design, General Electric has the experience and engineering skill to provide dependable locomotives for any requirement.

LOCOMOTIVE DEVELOPMENT

MODERN RAPID TRANSIT CARS



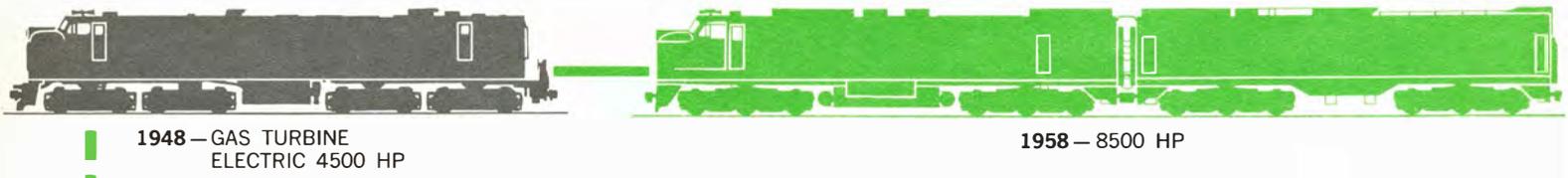
For more than half a century General Electric has played an important part in developing and equipping electric-powered cars for urban transportation. Motors, controls and associated equipment have the G-E characteristic of reliable performance.

RECTIFIER ELECTRIC LOCOMOTIVES

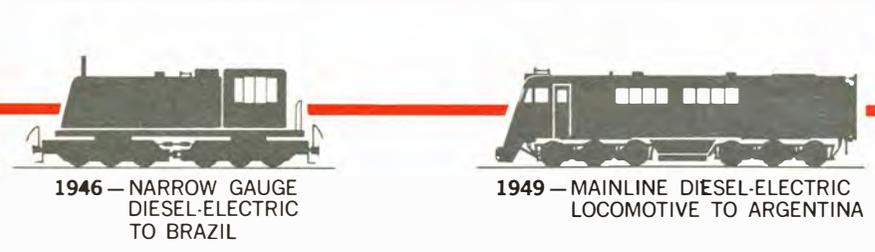


Electric locomotives, ranging from 1½-ton battery trammers to world-famous GG-1 passenger locomotives and to rugged 4400 hp rectifier freight locomotives, indicate the range of product development possible from a manufacturer dedicated to serving the world's railways.

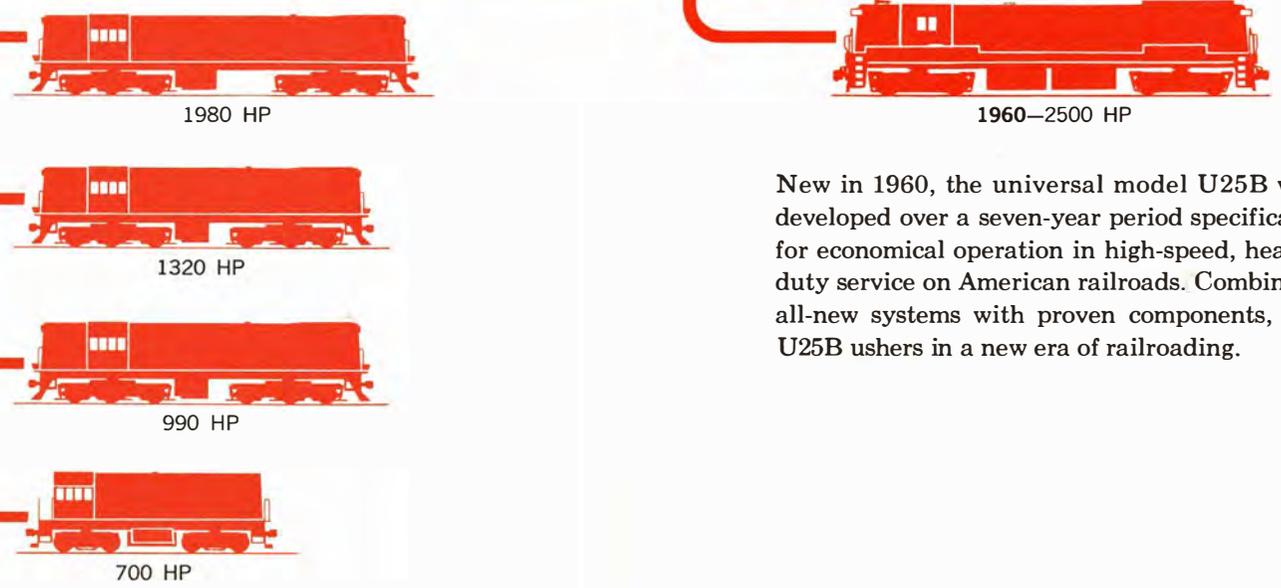
GAS TURBINE ELECTRIC



An outstanding example of engineering skill and pioneering effort, the record-breaking 8500 hp gas turbine-electric is the world's most powerful self-contained locomotive. Its introduction signaled a new milestone in railroad progress.



UNIVERSAL DIESEL-ELECTRICS



New in 1960, the universal model U25B was developed over a seven-year period specifically for economical operation in high-speed, heavy-duty service on American railroads. Combining all-new systems with proven components, the U25B ushers in a new era of railroading.

INDUSTRIAL & MINING LOCOMOTIVES



G. E. offers a complete line of proved-in-service units



4000 hp Rectifier Electric

New Haven R.R., U. S. A.

To meet the many different needs of rail transportation, General Electric manufactures a wide range of locomotives to operate efficiently in various types of service. Performance records testify to the high availability and continuing efficiency built into every G-E locomotive.



3300 hp Rectifier Electrics

Norfolk & Western R.R., U. S. A.

DUAL VOLTAGE RECTIFIER ELECTRIC rated at 4000 hp is used to haul high-speed passenger trains.

ELECTRICS OPERATING IN MULTIPLE produce 6600 hp for heavy freight runs over rugged terrain.



2480 hp, 2400-volt d-c Units

Butte, Anaconda & Pac. R.R., U. S. A.

HEAVY-DUTY DC ELECTRICS form an integral part of an efficient mining operation.

8500 HP GAS TURBINE-ELECTRIC put into operation in 1958 performs high-speed freight duty in vast plains and mountain regions of the U.S. This giant of the rail industry is one of the more recent developments pioneered by the Locomotive & Car Equipment Department.

8500 hp Gas Turbine-Electric

Union Pacific R.R., U. S. A.





80-ton Diesel-Electric

Petroleos Mexicanos, Mexico

80-TON DIESEL-ELECTRIC locomotive helps keep production high at a busy oil refinery.

65-TON DIESEL-ELECTRIC speeds operation of a large cement plant.

45-TON DIESEL-ELECTRIC carries out fast, reliable hauling operations at a steel salvage company.

35-TON DIESEL-ELECTRIC does heavy-duty work for a coal mining and processing company.

25-TON DIESEL-ELECTRIC locomotive provides versatile motive power for a public utility.

50-TON ELECTRIC mine locomotive is but one of the many models and weights that have found acceptance in all parts of the world.



65-ton Diesel-Electric Southwestern Portland Cement Co., U. S. A.



45-ton Diesel-Electric Southwest Steel Corp., U. S. A.

25-ton Diesel-Electric

Penn. Power Co., U. S. A.



35-ton Diesel-Electric

Old Ben Coal Corp., U. S. A.

50-ton Electric

Mathies Coal Co., U. S. A.



Mainline Diesel-Electrics



990 hp Model U9B

Paulista Railway, Brazil

THE UNIVERSAL DIESEL-ELECTRIC LINE of locomotives was first introduced in 1956 and has been winning world-wide acclaim ever since. Available in track gages from 36 to 66 inches, they are built for reliable, efficient service in any climate, at any altitude, anywhere in the world. Versatility plus simplicity of design and interchangeability of parts has made these locomotives a profitable investment for an ever-increasing number of railroads.



1320 hp Model U12B

South African Railways

990 HP MODEL U9B combines low operating cost with high availability.

1320 HP MODEL U12B's are fast, economical movers of heavy freight, and perform efficiently in both main and branch line service.



1980 hp Model U18C

Turkish State Railways

1980 HP MODEL U18C is used in both heavy-duty freight and high-speed passenger service.

700 HP MODEL U6B meets demanding railway requirements in around-the-clock operation.

MODEL U6B's are extremely versatile; can be used for freight, passenger and switching service.



700 hp Model U6B

International Railways of Central America



Model U6B Santa Maria Valley R.R., U.S.A.



2500 hp Model U25B Demonstrators

Pennsylvania R.R., U. S. A.

2500 HP MODEL U25B is a new diesel-electric standard for American railroads. It combines high horsepower with a minimum of machinery; produces 625 hp on each of four axles for increased train speeds.

1320 HP MODEL U12C provides reliable passenger service, performs equally well in through-freight hauling.

MODEL U12C offers high operating performance and fuel economy along with low maintenance costs.

1980 HP MODEL U18C is built for rugged operating conditions, has proved dependable and efficient.



1320 hp Model U12C

National Railways of Colombia

Model U12C

Argentine State Railways

1980 hp Model U18C

Sorocabana Railway, Brazil



General Electric locomotives are operating the world over

More than 20,000 locomotives have been built by General Electric for the world's railways. The well known dependability of these locomotives makes them particularly suited for operation in remote areas. Owners of General Electric locomotives report efficient, economical performance at all altitudes – from sea level to 14,700 feet – and in temperatures ranging from 130° F. in Saudi Arabia to –65° F. in Alaska.



COUNTRIES THROUGHOUT THE WORLD WHERE GENERAL ELECTRIC LOCOMOTIVES ARE OPERATING

- | | | | | | |
|----------------|--------------------|-----------|-------------------|-----------------------|------------|
| Argentina | Canal Zone | France | Luxemburg | Philippine Republic | Sweden |
| Australia | Chile | Guatemala | Manchuria | Portugal | Trinidad |
| Austria | Colombia | Honduras | Mexico | Puerto Rico | Turkey |
| Belgium | Congo Republic | India | Netherlands | Republic of the Congo | Uruguay |
| Bolivia | Costa Rica | Indonesia | Northern Rhodesia | Saudi Arabia | U.S.A. |
| Brazil | Cuba | Italy | Norway | South Africa | U.S.S.R. |
| British Guiana | Dominican Republic | Japan | Pakistan | South West Africa | Venezuela |
| Burma | Ecuador | Korea | Panama | Spain | Yugoslavia |
| Canada | El Salvador | Liberia | Peru | Surinam | |



WHAT OF THE FUTURE? Today, as in the past, designers and engineers at General Electric are hard at work developing new ideas, refining the proved methods now in use, and blending both to create even better G-E locomotives in the future.

Advancing technology may some day produce diesel-electrics of 4000 or even 5000 horsepower per four-axle unit. Further improvements in the gas turbine-electric will make it an even more efficient freight mover than it is today. Recent advances in the development of power applications with commercial voltage systems, and experiments with fuel cells, increase the potential of electric locomotives. And nuclear power, in spite of tremendous economic and technological barriers, offers a new avenue for progress.

Whatever form railway progress takes, the locomotives of the future will be characterized by increased efficiency and greater economy.

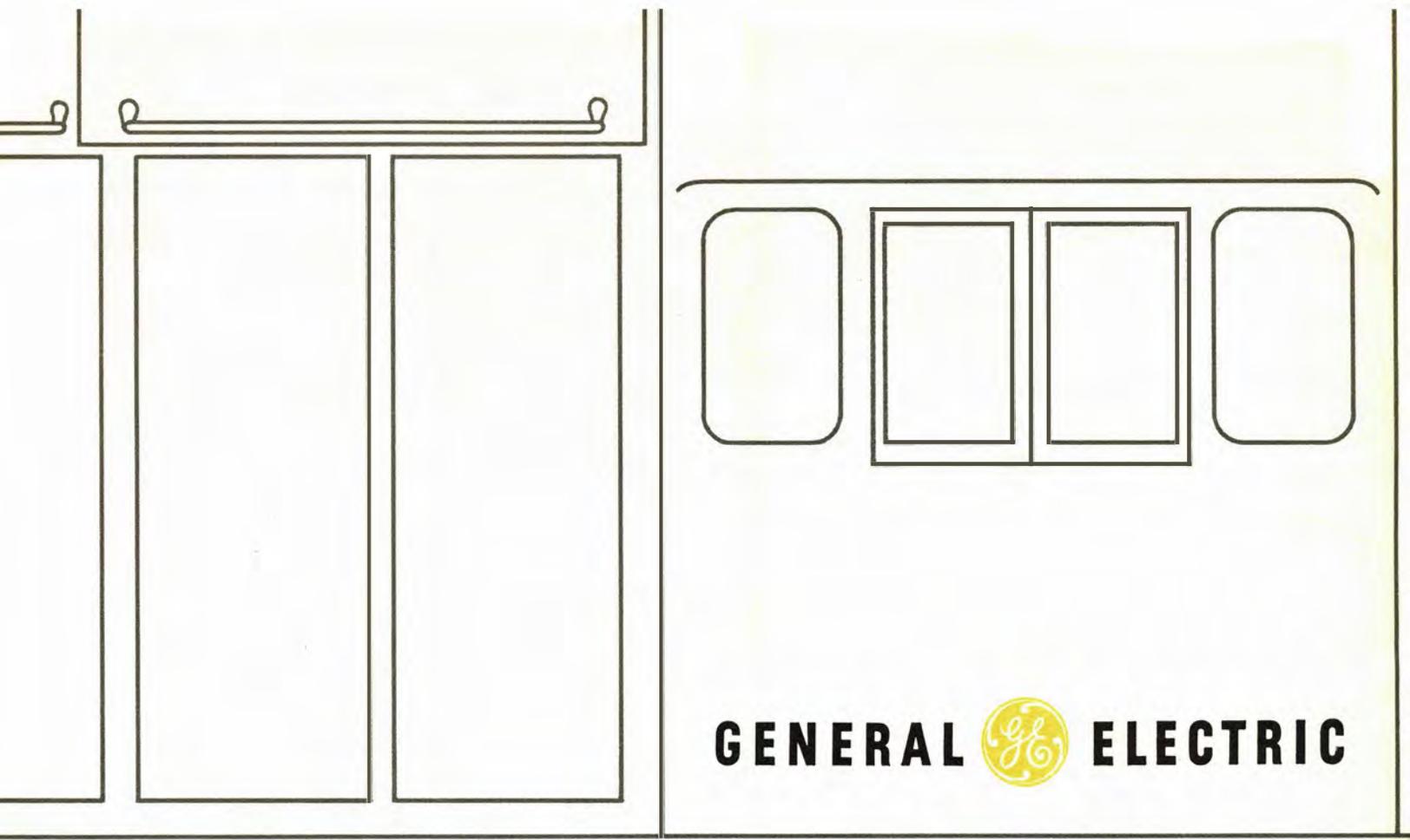
General Electric – the company with experience, skill and imagination – the company dedicated to “Progress” – will produce these locomotives.

UNITED STATES:

General Electric Company
Locomotive & Car Equipment Dept.
2901 East Lake Road
Erie, Pennsylvania, U.S.A.

WORLDWIDE:

International General Electric Co.
150 East 42nd Street
New York 17, New York
U.S.A.



GENERAL  ELECTRIC

