


 HOKURIKU HEAVY INDUSTRIES, LTD.

COMPANY PROFILE



 HOKURIKU HEAVY INDUSTRIES, LTD.

7-3-69 Yamakido, Higashi-ku, Niigata, 950-0871 Japan

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Toward Our Dream of 1.15 Million Kilometers.

Rolling stock running on, protecting, and supporting railways across Japan and the world.

We at Hokuriku Heavy Industries, Ltd. are committed to manufacturing with earnestness throughout our production, taking advantage of our ability to make proposals that meet the needs of the times and our capabilities to respond through our polished technological abilities and integrated production system.

All while we chase our dream along the world's combined 1.15 million km of railways—enough to circle the Earth 28.7 times.

OUR MISSION

We provide joy and satisfaction to our customers in the “manufacturing service industry”.

Our mission is supported by 3 pillars

1

Proposal Power

2

Technical Capabilities

3

Responsiveness

We continue to support safe and secure infrastructure for society with thoroughly custom specifications.

As a development company responding with agility and flexibility to changing times

For the more than half century since we were established in 1965, we have always believed in being honest with our customers and with society.

Locomotives and maintenance trains (cars that maintain railroad tracks and overhead wiring) have long played the role of unsung heroes supporting society's infrastructure.

Due to Japan's aging populace and shrinking workforce, we are at the stage where those old-fashioned cars need proactive technical innovations to make them easier to operate, respond to trouble quickly and easily, and even run automatically. Being carbon neutral is also a major proposition for us.

We recognize that we are a development company, and continue to make bold undertakings such as hybrid cars and lithium-ion battery locomotives.

All of our employees will continue to work together to deliver products that are safe and secure, easy to use, highly economically efficient, and will put a smile on our customers' faces.

President and CEO *Koji Horigami*

Philosophy

We aim to be a manufacturing service industry. Not merely to make high quality products delivered on time. Our real worth is in giving serious consideration to what we can do to make our customers happy and making that a reality!



History

1965
Established in Enokicho, Niigata City
Later moved to our present location

1970
Began exporting locomotives (Taiwan)



2005
Began manufacturing large locomotives
Manufactured 80-ton telecontroller locomotive



2008
Second factory completed, ISO 9001 certified

2015
50th anniversary of establishment



2018
KYOKUTO KAIHATSU KOGYO CO.,LTD. group

2020
Capital increased to 97.5 million yen

2021
New office building and new factory completed

Corporate profile

Corporate name	HOKURIKU HEAVY INDUSTRIES,LTD.
Address	7-3-69 Yamakido, Higashi-ku, Niigata, 950-0871 Japan
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Representative	Koji Horigami President and CEO
Establishment	November 2, 1965
Employees	58 (as of April 2023)
Capital	97.5 million yen

Sustainability Our Initiatives

CSR

Our group receives a variety of expectations from stakeholder against a backdrop of social issues. In order to respond to this, we will fulfill our social responsibility as we conduct our business activities.



▲ Completing final vehicle inspection on 80-ton locomotive delivered for subway in Cairo, Egypt, as part of a Japanese Official Development Assistance (ODA) project

SDGs

Our entire group is implementing business activities and a variety of initiatives toward achieving the SDGs.



Social Contribution Activities

Factory and Facility Tours
In order to increase interest in manufacturing and deepen understanding of local industry, we allow factory tours by a variety of groups and local elementary and junior high schools, in particular.



▲ Factory tour for elementary school students

1 PROPOSAL POWER

The proposal power that leads to customer satisfaction

Building better rolling stock with our customers. This is not what could be called "catalog sales," but rather we meet with customers repeatedly to find what is best for them, then spare no effort to make that a reality.

From consultation to final delivery Our custom flow delivers high satisfaction



All of Hokuriku Heavy Industries' rolling stock is designed and built to order from scratch based on the customer's requirements. This makes possible the kind of detailed customer specifications you cannot get when choosing a model from a catalog. We devote all our strength to manufacturing rolling stock you will use for a long time and that will make you feel, "We're glad we chose Hokuriku."

> 100% Customer Specifications on Rolling Stock

Not only can we meet your required specifications for individual cars, but we also design with consideration for such details as the layout of the motorman's seat and the shape of steps and handrails for the ease of use of this rolling stock in the place it will actually be used.

> Cost Proposal Over the Rolling Stock's

Taking not only the rolling stock's initial cost but also its running cost into consideration, we offer proposals that will see your satisfaction continue into the future, such as construction that is easy to maintain and lithium-ion batteries that are replaced less frequently.



> Development and Proposal Precedents

We pursue layouts where the ease of use for users is the primary concern, arrange instruments to reduce the burden on motormen for increased safety and operability, and design every detail in response to the unlikely event of a breakdown. The imagination and technology of our full-time staff is used to the fullest to respond to your requests.



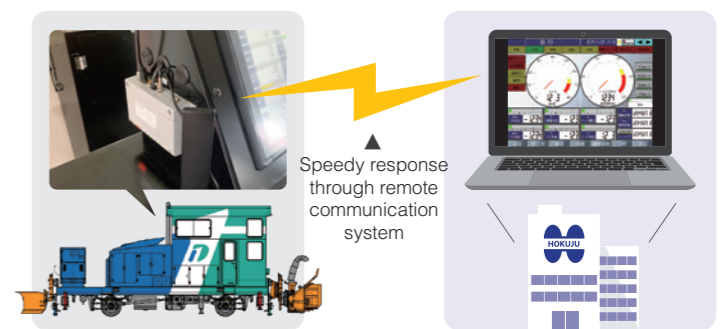
Large motorcar for Shinkansen that can run on its own electric motor even if engine trouble occurs thanks to its hybrid system ▶

● Easy-to-see instrument panel and easy-to-use control panel



Using touchscreens ▶

● Maintenance system using remote communication system



Speedy response through remote communication system

From Niigata to All of Japan, and to the Whole World

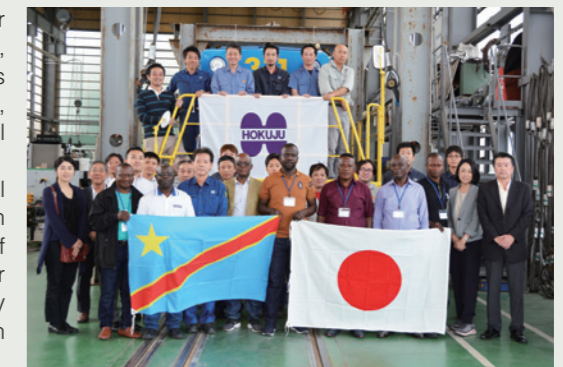
Hokuriku Heavy Industries' rolling stock is in use not only in Japan but in countries around the world. Well versed in international standards for railways, we can deliver locomotives, maintenance cars, and other special cars from Niigata, "that one car for the customer" that meets the operating environment and purposes for which it will be used.



Export Precedents

Cooperation with Official Development Assistance (ODA) projects

Starting with supplying rolling stock for Taiwan's national railway in the 1970's, Hokuriku Heavy Industries has provided more than 800 cars to Asia, Africa, the Middle East, and Central and South America. Serving to support international transportation infrastructure, in addition to the design and manufacture of rolling stock, we make full use of our advanced maintenance technology and cooperate enthusiastically with ODA projects.



2 TECHNICAL CAPABILITIES

The technical capabilities to thoroughly respond to any requests

With over 50 years of expertise in the design and manufacture of rolling stock, our dedicated project staff works closely to meet your requirements.

Integrated Production at Our Factories

Design, manufacturing, painting, assembly, and electrical wiring are all handled by our company. In addition to the technology, we have accumulated in each of these areas, building it in-house allows us to respond to your requests through our coordinated production process.



3 RESPONSIVENESS

Responsiveness characterized by speedy and accurate response

We make the most of the remote maintenance system to respond swiftly and properly to trouble even after product delivery.

> Speedy Response to Trouble

The remote maintenance system we have installed since 2012 allows our company to know the state of rolling stock 24 hours a day, 365 days a year. In the unlikely event of a breakdown, a speedy and accurate initial response can be effected, with support in the field.



> Monitoring the State of Rolling Stock

We can periodically check remotely the details of an anomaly that has occurred, the state of the rolling stock, and the state of operation that are saved. This data is used to prevent breakdowns and to investigate the cause when trouble occurs.



> Craftsman Skills in Response to Special Orders

At Hokuriku Heavy Industries, we design and manufacture many special-order products, and both the main frames and driver's cabins of our rolling stock are made to order. The full-time project staff demonstrates their craftsman skills as they picture the cars in use, working to make even better rolling stock.



> Quality Management System

In accordance with ISO 9001, strict in-house testing is conducted based on the wealth of feedback our customers have provided to date. We strive to ensure a quality level that will satisfy our customers.

ISO 9001 certified in 2008, and remains certified at present ▶



> Overhaul Support

We support long decades of safe usage through overhauls of main parts such as engines, transmissions, and decelerators. You can also contact us about repainting your cars.



> Maintenance and Inspection Support

We conduct rolling stock maintenance including annual inspection and general inspections so you can feel secure using the rolling stock you purchased. Trust us not only for changing oil filters but also inspections of power and running gear, the kind of meticulous response only the maker can provide.



Taking On New Technologies

We work toward making full use of new technologies in developing new rolling stock in response to social issues such as decarbonization, noise reduction, and optimized maintenance.

Garnering Expectations as the Standard for the New Era Towing vehicle with lithium-ion batteries on board

We develop state of the art motor-driven towing vehicles with lithium-ion batteries on board. In place of the diesel locomotives that were commonplace as conventional towing vehicles, we are progressing with making zero carbon emissions a reality.

Feature
#1

Lithium-Ion Battery + Motor

The lithium-ion battery supplies power and the motor supplies drive in this drive system. In addition to decarbonization, this also contributes to noise reduction and optimized maintenance.

Feature
#3

Can Run at 20 km/h Even on a 20% Steep Grade

We have made it possible to run at a top speed of 20 km/h even on a 20% steep grade while pulling 400 tons of rolling stock.



Specifications

Size	16,900 mm long x 2,750 mm wide x 3,762 mm high
Weight in working order	55 tons
Rail gauge	1,067mm
Wheel diameter	860mm
Truck	Two-axle bogie
Motor	400 V/355 kW x 2 motors
Battery capacity	225 Ah (22 series x 5 parallel) x 2 sets
Top speed	20 km/h (when towing)
Towing weight	Flat sections: 1,000 tons 20% grade sections: 400 tons



Delivery Information

In April of 2023, we delivered 2 cars to replace diesel locomotives that had served Japan Transport Engineering Company for about 50 years. One a light green that called to mind fresh shoots in spring, the other a light blue evoking a clear blue sky, the two cars are environmentally friendly, aiming for decarbonization and reduced exhaust and noise. They were dubbed "ECOMO" (short for Ecological-Mobility) and are in service now.

Feature
#2

Secure Dual System Power Unit

Center cab layout with the driver's cabin situated in the middle of the car. With the battery and motor located separately in the front and rear, the power unit becomes a dual system. Even in the unlikely event of a breakdown of one of the two systems, it is possible to run on the power of the other.

Feature
#4

Secure Dual System Braking Unit

Equipped with dual systems of both regenerative brakes and air brakes. Regenerative brakes are used in normal operation. When below the effective speed for regenerative brakes or maintaining a stopped condition, or if the regenerative brakes have been released due to a breakdown of the main circuit, then the air brakes operate.

Photos courtesy of Japan Transport Engineering Company