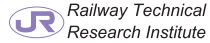




InnoTrans 2016
20-23 SEPTEMBER · BERLIN

JORSA Member Exhibitor's Guide



Nabtesco



YASHIMA



JORSA JAPAN OVERSEAS RAILWAY SYSTEM ASSOCIATION

Tekko Bldg. 1-8-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005 JAPAN
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Printed in Japan 100 B1

Quality
JAPAN



Japan Overseas Railway System Association (JORSA) is representing 33 member companies of Japanese leading Rolling Stock, Electrical Equipment, Signaling System and other railway manufacturers and major trading firms.

JORSA is continuously participating in InnoTrans, the world largest railway-related exhibition, since 2002 with JORSA member companies, and JORSA occupied an entire hall since 2012, the first time in the history of InnoTrans that a single country did so.

For InnoTrans 2016, JORSA will take up an entire hall (7.2a) again as the JORSA Pavilion.

Our 19 member companies will exhibit at InnoTrans 2016, and 12 out of these will exhibit jointly in JORSA Pavilion.

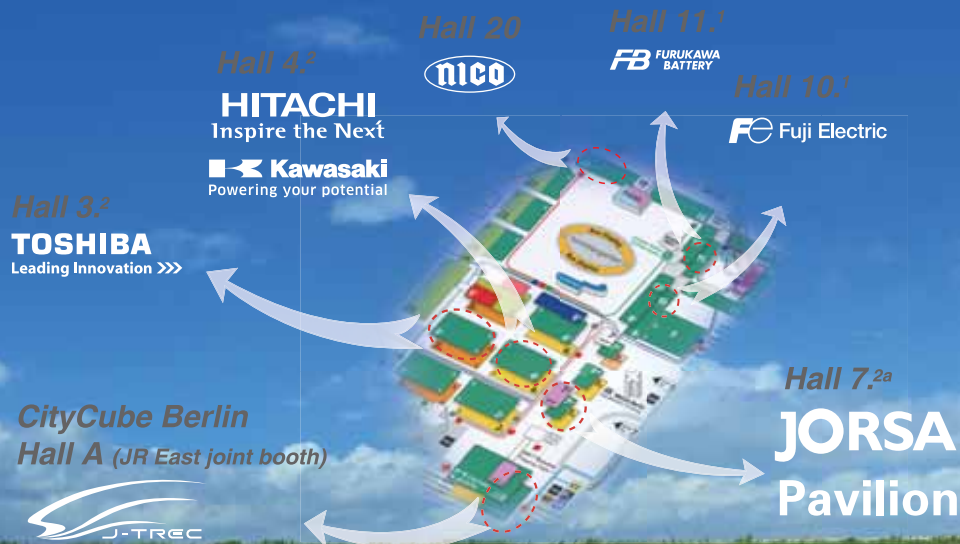
In addition, Tokyo Metro and the Railway Technical Research Institute (RTRI) will also exhibit in JORSA Pavilion.

In this JORSA guidebook, we would like to introduce these 19 member companies with their products outline and content of exhibition.

Sincerely you are welcome to JORSA Pavilion of 7.2a at InnoTrans 2016.

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- P.30 Hall 20 Hitachi Nico Transmission Co., Ltd.
- P.32 Hall A Japan Transport Engineering Company (J-TREC)



Hall 7.2a

Stand No.

100-01

Japan Overseas Railway System Association (JORSA)



1. JORSA Profile

Japan Overseas Railway System Association (JORSA) was established in 1953 as a specially authorized organization under the export import Transaction Law of Japan. JORSA is an umbrella organization for 33 members of leading Japanese railway-related manufacturers and trading firms.

2. Activity

JORSA is promoting not only exporting of all types of railway system & major equipment and components, but also establishing cooperative relationship with world-wide railway operators and manufacturers for Metro, Monorail, Urban Mass Transit and High-Speed Rail etc. in cooperation with our 33 member companies.

JORSA's main activity is to widely introduce advantage and merit to adopt Japanese railway system, products & technology as follows.

(1) Overseas Public Relations

- Publication of English Catalogues etc.
- Visual PR materials of DVDs
- Conducting of Japanese Railway Seminars
- Participating in world-wide Railway Exhibitions
- Website



Publications and visual materials

(2) International Duty

- Education & Training Program
- Hosting from overseas delegates

(3) Trade Insurance (as the application window of members)

Trainees



Observation groups



Exhibitions



Seminars





Hall 3.2

Stand No.

404

TOSHIBA

Leading Innovation >>>

TOSHIBA CORPORATION

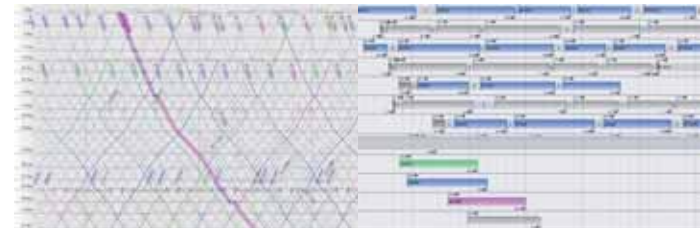
Company Profile

We have attended InnoTrans previously in 2010, 2012, 2014 and hope in 2016 to achieve greater success than before. We will present energy saving solutions that may assist you in reducing energy costs and CO2 emission with our innovative and green technologies for railway systems.

Toshiba will showcase these eco-friendly solutions.



Permanent Magnet Synchronous Motor



**Cloud based Transit Scheduling System
(Trueline)**

Toshiba will take this opportunity to 'showcase' our cutting edge technology with a 115 year history in the transportation systems industry, as well as their continuous contribution to the corporate environment, and through innovation to improve the quality of life in society.

Company Profile

Hitachi is one of the few global manufacturers offering total railway systems. From award-winning rolling stock to first class products and services, including traction, signalling, traffic management systems and power distribution – Hitachi lead the way in railway technology worldwide.



Hitachi traffic management systems enable station staff and control rooms to communicate a wide variety of information to passengers, for a safe, secure and reliable railway operation. Offering predictive monitoring alongside automatic timetable recovery, Hitachi ensures an efficient service – 365 days a year.

The Class 800/801 train represents the largest rail project in the United Kingdom. Hitachi will provide 122 trains which include bi-mode operation, making them capable of running on diesel and electric power to key lines from 2017, and will provide maintenance across 27.5 years.



Company Profile

Kawasaki is a worldwide technology conglomerate of transportation and industrial equipment, manufacturing a wide range of products for land, sea and air. For over a century Kawasaki has manufactured rolling stock, beginning with Japan's first privately built steam locomotive and first aluminum alloy train, to high-speed, subway, inter-city and commuter trains for markets in Japan, the US, as well as Asian markets including Taiwan, Singapore and China.



7000 series cars for Washington Metropolitan Area Transit Authority



C151A MRT cars for Land Transport Authority of Singapore

Exhibited product



Kawasaki's new-generation truck "efWING" uses Carbon Fiber Reinforced Plastic (CFRP) leaf springs to bring new innovation to rolling stock technology. The weight saving properties of CFRP offer numerous performance advantages, including increased safety, ride comfort, environmental friendliness, and reduced running costs.

The prototype of efWING is exhibited at Kawasaki's booth in Hall 4.2.



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JORSA Pavilion

Event

› **Site Seminar**

Tue. 20 Sept. to Fri. 23 Sept.

› **Japan Day Reception**

Wed. 21 Sept. from 16:30 to 18:00

Performance (occasional)

› **Tea Ceremony**

› **Classical Japanese Dance**

› **Sushi Service**

(Tokyo Station)

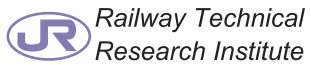
JORSA Pavilion Exhibitors

Floor Plan

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100-05 (P.21)



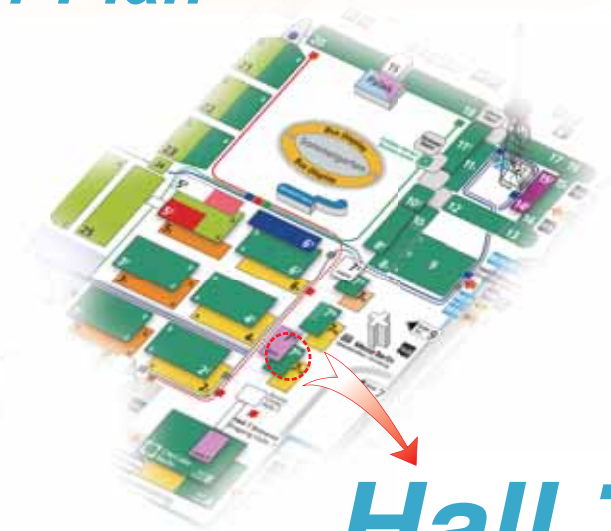
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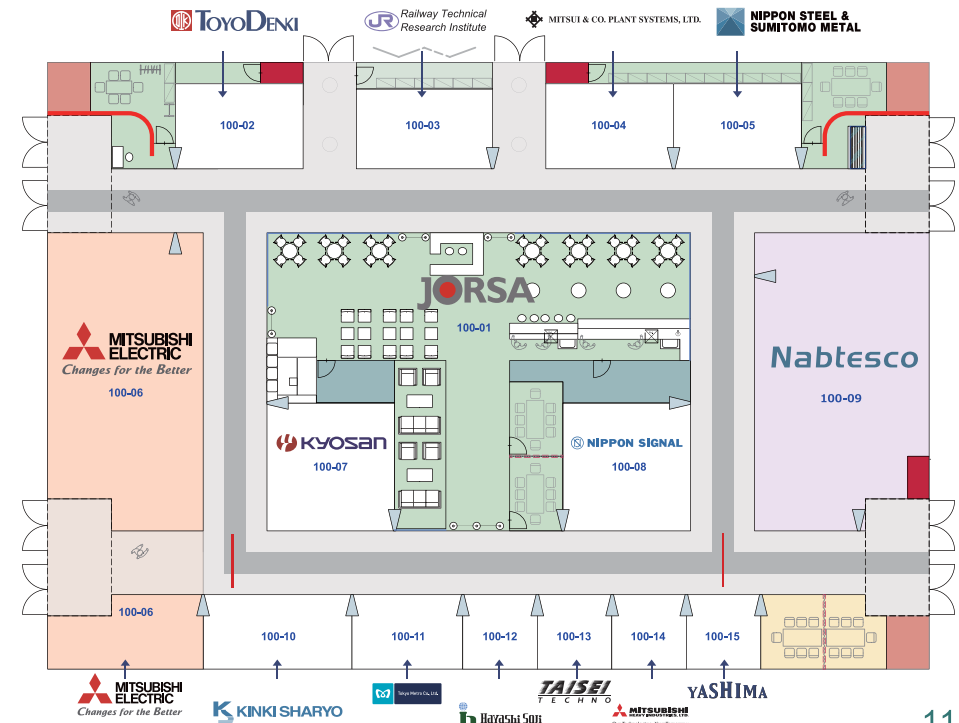
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100-15 (P.24)



Hall 7.2a





Hall 7.2a

Stand No.

100-12



Hayashi Soji Corporation

Company Profile

Our company is a specialized Maker for the total manufacturer of railway safety and signaling equipment's. In general, not only the point section and crossing parts usually each railway companies uses. We have obtained highest reliability on our products concerning on turnouts parts as a whole in recent years. Our products have been highly evaluated at international markets with tremendously best results from the abroad nation likewise from Taiwan, Hong Kong and United Kingdom.

Products



Bulking Prevention Sleeper Anchor Plate (For Oversized sleepers)

These Sleeper anchors are designed to fit the sleepers. Which are attached to the both end of the sleeper to prevent bulking as well to prevent bulking through advanced lateral ballast resistance force of the rail. If not installed the lateral resistance is approximately 1.5 times at the sharp curve point of track which leads irregularity and expansion of the rail especially in summer to prevent rail distortion.



Rail inclination prevention Gauge Tie.

This gauge Tie can prevent rail inclination as well as effective for Gauge maintenance. Regardless the type, only changing the stroke and tightening the clamp that fits to any type rail application.

Company Profile

Since founded in 1920, Kinki Sharyo has never failed to deliver railcars on time and within budget in any project all over the world.

We carefully listen to our customer needs and we commit to provide individual and customized design. We accomplish this through collaboration with various suppliers in the world.



LA METRO Light Rail Vehicle
For Los Angeles County Metropolitan
Transportation Authority

One train consists 2 boxes with 1 articulated section. The roll of Kinki Sharyo is design, manufacturing, supply, testing and commissioning of this Project. Key components were made in the USA and final assembly has been performed locally to comply with Buy America Act.



2000 Series Subway for Sendai
City Transportation Bureau

One train consists all 4 motor cars with linear motor system. This train is used for operation of Sendai Subway Tozai line which has started its operation since December 6 2015. The front crescent moon shape means family emblem of Mr. MASAMUNE DATE who is very famous SAMURAI closely linked to Sendai about 450 years ago. The inauguration of this line is recognized as a recovery symbol from Tohoku earthquake and Tsunami disaster around this area on March 11 2011.

Company Profile

Since its establishment in 1917, Kyosan Electric Manufacturing, Co., Ltd. has been providing railway signaling systems, traffic management systems and power conversion systems, and is now extending its business to platform safety solutions, complying with contemporary and environmental requirements, and to the global market via its overseas divisions. The company has been introducing leading innovation to the world.

Next-generation Electronic Interlocking

Kyosan developed and delivered its first Electronic Interlocking Equipment (EIE) in 1984 and has been continuously enhancing its performance with the advancement of computer and communication technologies, ever since. At InnoTrans 2016, Kyosan exhibits the latest Electronic Interlocking Equipment for the first time. With the new model, comparing with our best-selling model K5BMC, processing speed has been improved. Also, external interface is enhanced.



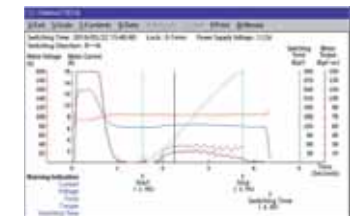
ESII-Type Electric Point Machine

ESII-type electric point machine is a compact, lightweight electric point machine unified with sleepers. We jointly developed the product with Research & Development Center of JR East Group, with the aim to improve lightning resistance and enable even more stable operation.



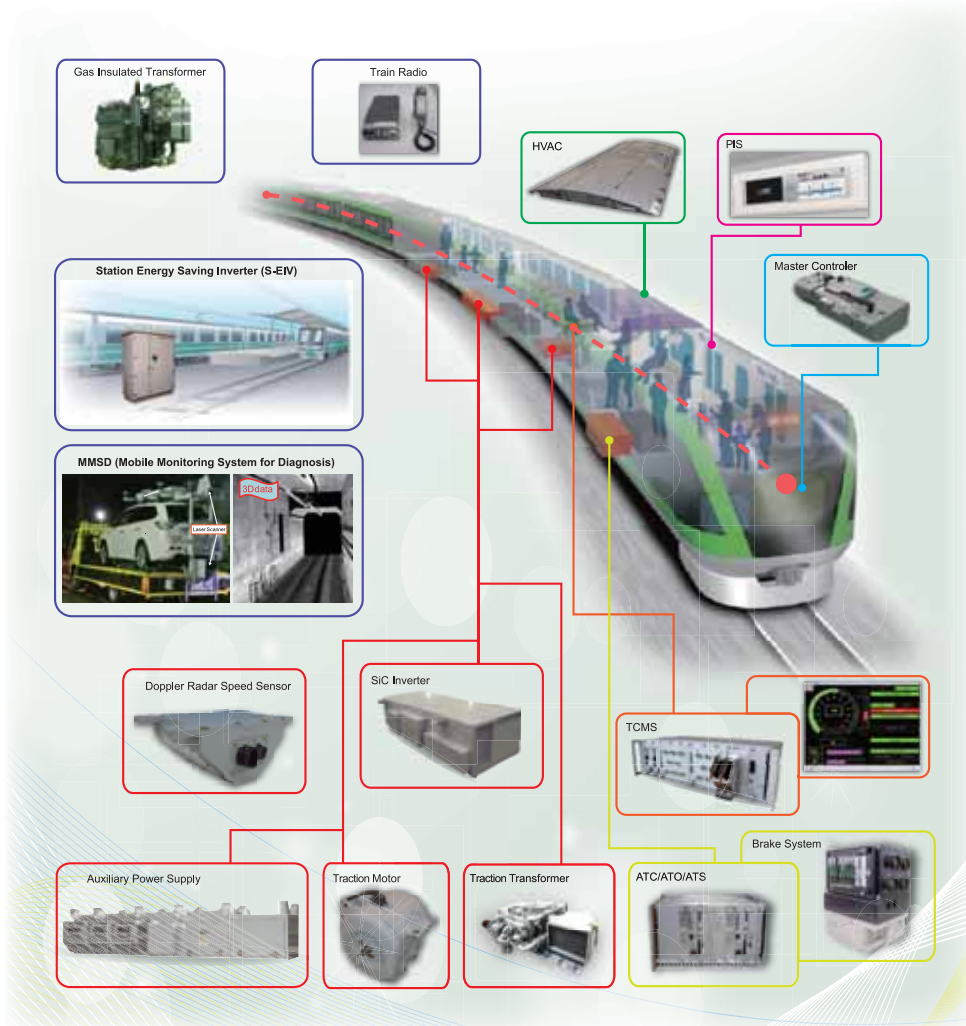
Point Machine Monitor

The Point Machine Monitor System automatically measures point machine switchover data, and monitors the status. The system assists in effective and preventive maintenance in addition to cause investigation in case of trouble.



Company Profile

Mitsubishi Electric intends to be a major force in 21st Century transportation.
Our international network supplies overseas markets with cutting edge technology.



Company Profile

Mitsubishi Heavy Industries (MHI) has successfully provided a broad range of transportation technology solutions over the past 30 years, ranging from Automated People Movers, Automated Guideway Transit to Mass Rapid Transit and High-Speed Rail. Our vast technical resources and experience ensure that we deliver projects on time and within budget, with the highest levels of safety, reliability, performance, and customer satisfaction.



Macau LRT (Light Rapid Transit), the first mass transit system in Macau



Super AGT (Automated Guideway Transit) achieving maximum speed of 120 kilometers per hour, roughly twice the speed of the conventional AGT system



Taiwan High Speed Rail

Dubai Metro

KVMRT Line 1
in Kuala Lumpur, Malaysia

Railway Electrification and
Double-Double Tracking of
Jawa Main Line in Indonesia



Company Profile

Head Office: Shiodome Sumitomo Bldg. 26F, 9-2, Higashi-Shimbashi 1-chome, Minato-ku, Tokyo, 105-0021, Japan
E-mail: mps-TKZPALh@dg.mitsui.com Tel: +81-3-6218-3276

Trading company specializes in transportation field

Window to the Japanese market

- Full access to major railway operators in Japan
 - Introducing new markets & new business partners
 - The largest importer for rolling stock components, track maintenance machines and track materials in Japan
- Major Customers : JR-Group, major private railways, local municipalities, monorail operators, and more...



Sleeper Exchange System



Bridge to the world market

- Mitsui's global network (139 offices in 66 countries/regions)
- Dealing with high quality railway related machines and components
- Strong relationship with renowned railway operators, consultants, and other service providers all over the world.

Regions and Countries
- Brazil
- India
- China
- Ireland
- South Africa
and more...

Company Profile

As a leading global partner with best solutions, Nabtesco Group creates the value of safety, comfort and a sense of security in arrange of social infrastructure-related fields with unique motion control technology.

In InnoTrans2016, Nabtesco introduces our latest railway products with world top class technology and quality.

PR



COMPACT CALIPER

- ▶ Compact size
- ▶ Weight saving
- ▶ Easy maintenance



**Electric Door System
Rack☆Star PLUG**

- ▶ World's lightest door operator
- ▶ Lubrication free
- ▶ Easy maintenance



Company Profile

Name in Full :	Nippon Signal Co., Ltd.	Head Office:	1-5-1,Marunouchi, Chiyoda-ku, Tokyo 100-6513 Japan
Establishment :	1928	Telephone :	+81-3-3217-7273
Capital :	10 Billions of yen	Telefax :	+81-3-3217-7239
President :	Yohei Furuhashi	E-mail :	overseas@signal.co.jp
Employees :	3,000	Website :	http://www.signal.co.jp/english/

Products and Services

We offer the wide range of products and services securing the safety and efficiency in public transportation system. We proudly cover;

- Railway Signal Systems which include automatic train control (ATC) systems, automatic train Protection (ATP) systems, centralized traffic control (CTC) systems, Relay/ Electronic Interlocking Equipment and Railway Crossing System and next-generation train control system utilizing the latest wireless technologies (CBTC) so on,
- Traffic Information Systems which include Universal Traffic Management System, Local Controllers and Signal Lights,
- Automatic Fare Collection Systems which include Automatic Passenger Gate, Automatic Ticket Vending Machine and Automatic Fare Adjustment Machine,
- Information Systems which include Parking Fee Collection Systems and Intelligent PARK-LOC® (flap type), and
- MEMS which includes Resonant Mirror, Laser Ranging/image Sensor and Laser Projector.

Project Achievement /Technical Expertise

Since we first supplied our products in 1948, we eagerly have expanded overseas business as follows.

CHINA: Beijing Metro Line 15 40.8km/ 21 stations CBTC (SPARCS) Dec. 2010 ~ 	KOREA: Gimpo Urban Railway 24km/ 11 stations CBTC (SPARCS) Under Construction (Revenue open from 2018) 	TAIWAN: High Speed Rail ATC, Electronic Interlocking, CTC July 2007~ 
IRAN: Mashhad LRT 18.4 km/ 21 stations ATO, ATC Feb. 2011~ 		TAIWAN: Taiwan Railways Administration, 156 stations CTC, Electronic Interlocking May 2003~ 
TURKEY: TCDD Izmir Suburban Line, 21.3 km/ 9 stations Electronic Interlocking, CTC May 2011~ 		MYANMAR: Yangon City, 10 cross sections and 1 traffic control center Dec. 2014~ 
DUBAI: Palm Jumeirah Monorail, 5.4 km/ 4 stations ATC/ TD, ATO, Electronic Interlocking Apr, 2009~ 	INDIA: Chennai Metro 32 stations (426 passages, 139 TVMs) AG, TOM, TVM, AVM, CCHS Jun, 2015~ 	INDIA: Delhi Metro Line 8 37km/ 25 stations CBTC (SPARCS) Under Construction (Revenue open from 2016) 

Company Profile

NSSMC has established a consistent quality control system throughout all processes, from material supply and design to manufacturing and shipping.

High cleanliness steel is manufactured in blast furnace.

The world leading steel and railway parts manufacturer since 1901.

- Bogies, wheels, axles, gear units, brake disks and rails for high-speed,

Mass rail transit, Heavy hauls and Locomotives -

NSSMC developed single axle steering truck, to solve the problems in sharp curve negotiation, such as large lateral force, squeal noise and excessive wear of wheel flange and rail gauge corner.

And this truck is adopted for the new train for Tokyo Metro.



NSSMC has been delivering reliable wheel, axle and wheelset as a unique manufacturer in Japan. Their superior performance and durability are highly praised by our customers both at home and overseas.



Company Profile

Taisei Techno Co., Ltd. has continued to use its technologies and expertise to meet challenges in new business sectors.

Many of our products are electrical equipment that involves air flow handling.

We are a R&D-oriented company with applied cutting-edge technologies.

Products



Wind turbine generators



Air cleaner



Comfort sensor



Roll filter unit



Fan forced heater

By combining the potential of its wind turbines with the electrical energy storage technology it has developed over the years, plus solar panel, Taisei Techno now has technology that can supply renewable energy—all the energy needed to power station facilities and operate a train.

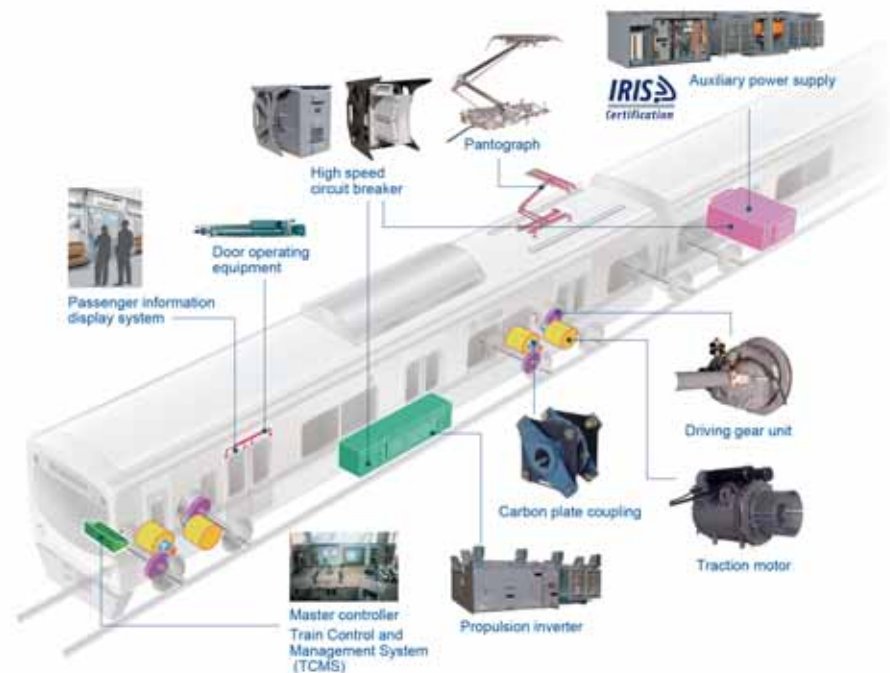
Contact

<http://www.taiseix.net>

Company Profile

Toyo Denki was established in 1918 to manufacture electrical equipment for trains in Japan. Ever since, we have worked to create products that deliver the safety and reliability required for railway applications in the world.

Our solutions include Traction Motor, Driving Gear, and Propulsion Inverter System, as well as Cab Peripheral Equipment, Door Operating Equipment, and Pantographs etc. By manufacturing these solutions, Toyo Denki helps to secure the safety and reliability of public transportation.

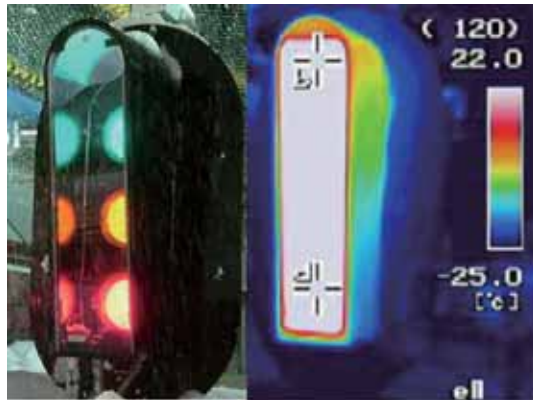


Electrical Equipment for Intercity Express/Commuter/Subway

Company Profile

Major Rail Products Distributor in Japan.
We contribute to your business! Procure reliable products from the Japan rail market.
Sell your products to the Japan rail market all through our customer network.

Our Main Displays at InnoTrans2016

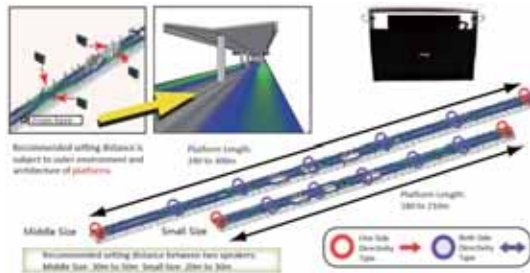


Polycarbonate & Glass Window Unit with Interior Panel and Curtain

Manufacturer:
(Window unit) Toho Sheet & Frame Co., Ltd.
(Interior Panel) SABIC
(Curtain unit) Kyowa Kogyo Co., Ltd.
●Whole & One-stop window related solutions for train

CLEARHEAT Self Heating Polycarbonate Signal Cover

Manufacturer: Toho Sheet & Frame Co., Ltd.
●To melt snow by Self-Heating System

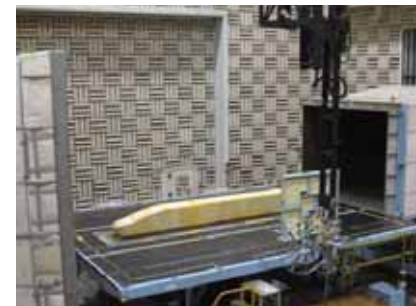


Flat Panel Speaker
Manufacturer: FPS INC.
●Front & Back, Both Side Directivity
●Strong Directivity
●Clarity sound to far place
●All-Weather Application
●Small Design

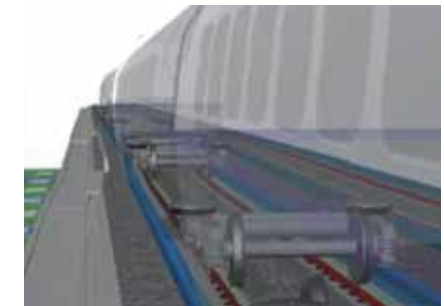
Company Profile

Railway Technical Research Institute (RTRI) is seeking for innovation of railways by introducing a variety of technologies covering from basic research to application in the fields of rolling stock, civil engineering, electrical engineering, information technology, materials, the environment and human sciences.

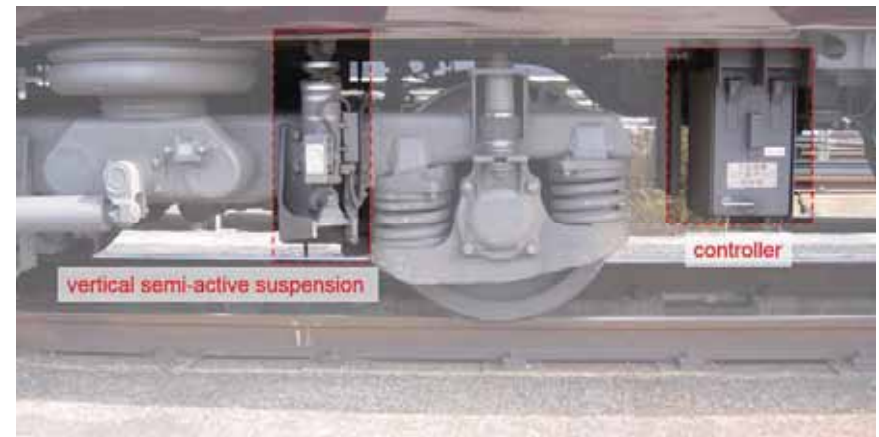
Heading for Innovation



Test facilities & Measurement skills
Photo: Low-noise wind tunnel



Simulation skills
Image: Vehicle-structure interaction



Design & Implementation
Photo: Vertical semi-active suspension



Company Profile

Keeping Tokyo on the move

Tokyo Metro is a subway operator with a network of nine lines and 179 stations covering a distance of 195.1 km in Tokyo, the capital of Japan. Actively adopting cutting-edge technologies, Tokyo Metro provides safe, sustainable transport service for 7.07 million passengers every day.



Tokyo Metro's newest rolling stock, Series 13000, utilizing state-of-the-art technologies



Stable operation in a high density network being ensured at Integrated Control Center



Constantly striving to improve customer service



Carrying out sophisticated maintenance



Hall 10.1

Stand No.

218



Fuji Electric Co., Ltd.

Company Profile

For over 40 years, Fuji Electric has used its inverter technology to develop a high-performance door operating system, an auxiliary power supply system, and a propulsion system. All transit system products have excellent reliability, maintainability, and high efficiency.

PR

To achieve a smaller footprint with reduction in weight, we are currently developing new auxiliary power supplies (APS) using our ALL SiC, making Fuji one of the few companies to combine both Railway equipment and power semiconductors in one solution.

Fuji is proud to offer the choice of two electric-driven door systems, our reliable Flat Cup Type Permanent magnet Motor (FCPM) door driven system for smaller carborne system configurations and our prestigious linear motor-driven door system for larger carborne systems that continue to provide high reliability, yet are lighter in weight.

To complement our Railway product offerings, we are developing a train communication card for our Train Control Monitoring System that is equipped with the real-time data protocol TRDP, conforming to the TCN standard IEC 61375-2-3, ensuring seamless interoperability of end devices. The card can be used with other communication protocols, including PROFINET, conforming to IEC 61375-3-4.

Products

1) Auxiliary Power Supply system



2) All-SiC Power Module



3) Electric driven Door System



FCPM driven type



Liner motor driven type

Hall 11.1

Stand No.

301



The Furukawa Battery Co.,Ltd.

Company Profile

The Furukawa Battery Co.,Ltd. has been being dedicated to development and production of batteries for various transportation systems including airplanes, automobiles, motorcycles, railways and ships for over the past 100 years.

The Furukawa's high-quality batteries have been employed by Japan's major railways, currently boast the top share in the bullet trains of Japan Railway (JR), and are used also in airplanes and space equipments.

The Furukawa's batteries are used in JR Narita Express trains which connect major cities in Tokyo metropolitan area with Narita International Airport.



FURUKAWA Alkaline Batteries for Train



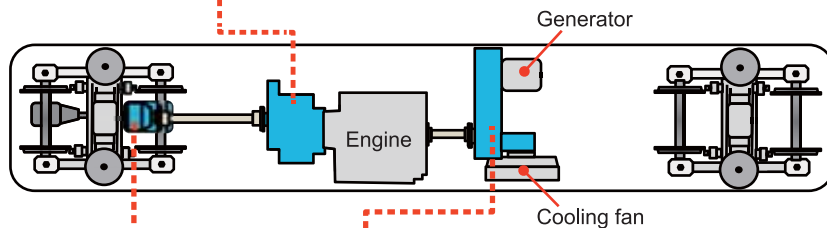
Company Profile

Hitachi Nico Transmission is a power transmission equipment manufacturer in Japan. We can provide standard products and special products in accordance with customer's requirements, for railway vehicles in the world.



Power-shift transmission

- Hydraulic-drive, 1-speed
Direct-drive, 4-speed
- High-efficiency
- Available air-cooled (without radiator)



Axle Drive Gearbox



Constant Speed Unit (CSU)

- For Generator and fan drive
- Keep required frequency by using electronically modulated hydraulic clutch.

[Products]

Torque converter, Power-shift transmission,
Constant Speed Unit, Axle Drive Gearbox

[Applications]

Diesel Railcar, Hybrid Railcar, Locomotive, Working Vehicles



Company Profile

J-TREC is a JR East family company specialized in rail transport engineering and manufacturing in rolling stock, freight containers, railway switches and turnouts. The J-TREC's forerunner is Tokyu Car Corporation, the first stainless steel rail car manufacturer in Japan since 1958.

Two types of "Hybrid Trains" in Revenue Service today



"Sustina Battery Hybrid" (Overhead Line + Li-ion Batteries)

Sustina Battery Hybrid is capable of operating on electrified line with power supplied from catenary wire and also on non-electrified line from power supplied solely by the onboard storage batteries.



"Sustina Diesel Hybrid" (Diesel Engine + Li-ion Batteries)

Sustina Diesel Hybrid is a diesel electric multiple unit with large capacity Li-ion batteries which allow storing kinetic energy to the batteries during brake mode and use the stored power during acceleration to the maximum efficiency.

