

# PROTERIAL



## COMPANY PRESENTATION

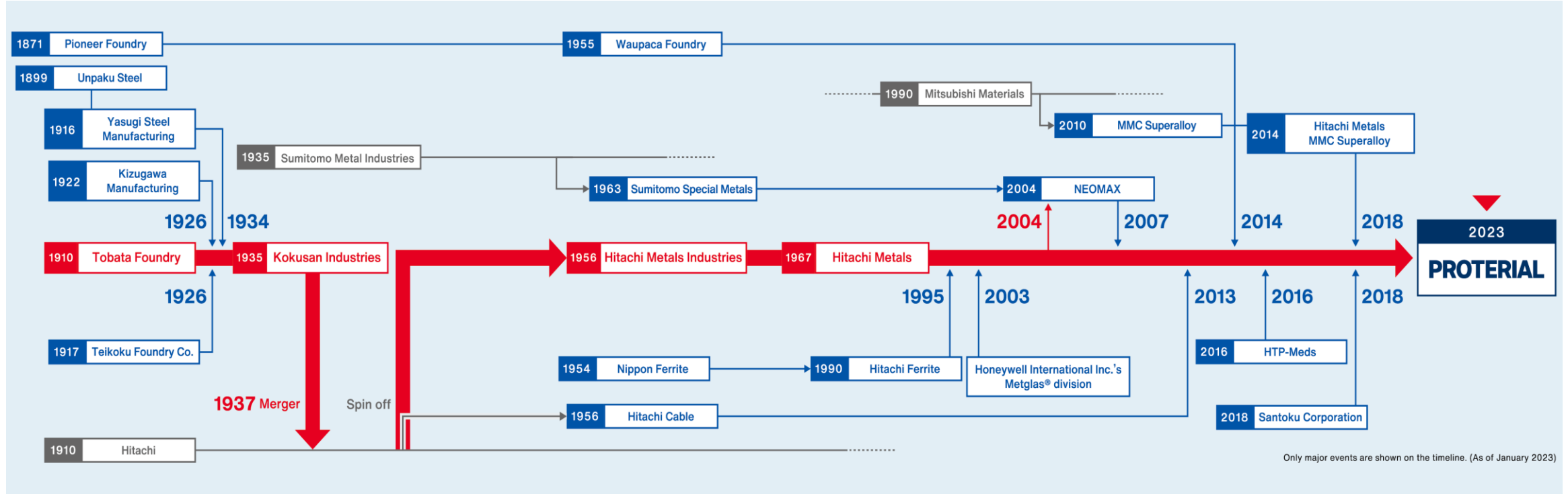


<b>Corporate Name</b>	Proterial, Ltd.
<b>Date of Establishment</b>	April 10, 1956
<b>Capital</b>	¥310 million(as of end of March 2023)
<b>Representative</b>	Sean M. Stack Representative Director, President and CEO
<b>Number of Employees as of end of March 2023</b>	Proterial Group, Consolidated: 26,496
<b>Revenues, FY2022</b>	Proterial Group, Consolidated: ¥1,118.9 billion
<b>Number of Consolidated Subsidiaries</b>	Japan <b>23</b> , Overseas <b>38</b> Total <b>61</b> (as of end of March 2023)
<b>Business Sectors</b>	Manufacture and marketing of Specialty Steel, Rolls, Automotive Casting, Piping Components, Magnetic Materials, Power Electronics Materials, Electric Wire & Cable, and Automotive Components

# History

Over its more than 100-year history, the Proterial Group has built a diverse portfolio of technologies, products, and businesses by delivering high-quality products around the world in line with customer needs. This is the source of our competitive advantage, and this diversity is what makes us Proterial.

We will continue to be an indispensable presence for our customers and society by expanding and strengthening the diversity we have cultivated throughout our history in the field of materials, where technology is changing rapidly.



Only major events are shown on the timeline. (As of January 2023)

“Proterial” reflects the essence of our Corporate Philosophy.

It combines “pro-” with the word “material.”

“Pro-” represents our “three pros”:

- Professional – work that exceeds expectations
- Progressive – a spirit that keeps challenging
- Proactive – an enterprising attitude

“Material” refers to the high-performance materials that our original technologies produce and underpinned by the three pros.

With our focus on solving customer issues and bringing new levels of value, we promise to contribute to the realization of a sustainable society through the products and services that embody our philosophy.

Our logo uses a typeface that expresses simplicity, power, and dignity. Its navy blue treatment suggests calmness and depth.

# PROTERIAL

## Mission

### Make the best quality available to everyone

Striving for the highest standards in our original technologies, products, processes, and people, we will bring new levels of value to customers all around the world.

### 質の量産

独創的な技術と、製品・ビジネスプロセス・人に関する高い質の追求によって、新たな価値を生み出し、世界の人々に広く提供していく

## Vision

### Leading sustainability by high performance

Through the creation of best-in-class materials, to be a company that solves individual customer issues and contributes to the prosperity and vitality of all.

### 持続可能な社会を支える高機能材料会社

お客さまの課題を解決する高機能材料の創造によって、持続可能な社会の実現に貢献し続ける企業となる

## Values

### Unflinching integrity

We earn the trust of our customers and other stakeholders by being honest and sincere in our daily activities and by understanding our obligation to the people and communities we serve.

### 至誠

人や社会に対する責任を常に自覚し、日々のあらゆる活動に誠実に向き合う。約束を守る、正直に行動することを徹底し、私たちに関わる全ての人々の信頼と期待に応える

### United by respect

Across our organization, we respect diversity and the free and independent exchange of opinions, learn from each other, and collaborate to achieve our common goal.

### 和すれば強し 蘇則彊

多様な個を尊重し、主体性をもって自由に意見を交わし合い、学び合い、共通の目的に向けてチーム全員の情熱と能力を結集することで成果を出す

## Major Operation Bases

### Europe

Proterial Europe GmbH  
 South Germany Office, Munich  
 Milano Branch Office  
 London Branch Office  
 Paris Branch Office

### Asia

Proterial (China), Ltd.  
 Beijing Branch Office  
 Guangzhou Branch Office  
 Suzhou Branch Office  
 Dalian Branch Office  
 Proterial Hong Kong Limited  
 Proterial Taiwan, Ltd.  
 Taipei Branch  
 Proterial Asia Pacific Pte. Ltd.  
 Proterial (Thailand) Ltd.  
 Proterial (India) Private Limited  
 Proterial Korea Co., Ltd.

### Japan

Proterial, Ltd.  
 Kitanihon Sales Office  
 Ibaraki Sales Office  
 Shinshu Sales Office  
 Central Japan Regional Office  
 Western Japan Regional Office  
 Chugoku Sales Office  
 Kyushu Sales Office  
 Global Research & Innovative Technology Center  
 Proterial Hallow, Ltd.  
 Proterial Solutions, Ltd.

### North America

Proterial America, Ltd.  
 Chicago Office  
 Detroit Office  
 Pittsburgh Office

### Specialty Steel Business Unit

**Japan** Yasugi Works  
 Okegawa Works  
 Metallurgical Research Laboratory  
 Proterial Specialty Steel, Ltd.  
 Proterial Metals, Ltd.  
 Proterial Precision, Ltd.  
 Proterial Yasugi, Ltd.

**North America** Diehl Tool Steel, Inc.

**Asia** Proterial (India) Private Limited  
 Proterial Korea Co., Ltd.  
 Proterial Specialty Steel (Dong Guan) Co., Ltd.  
 Proterial Metals (Suzhou), Ltd.  
 Proterial Specialty Steel (Ningbo) Co., Ltd.  
 Proterial Taiwan, Ltd. Five Ace Factory

### Roll Business Unit

**Japan** Proterial Wakamatsu, Ltd.

### Automotive Casting Business Unit

**Japan** Moka Works  
 Casting Technology Research Laboratory  
 Kyushu Techno Metal, Ltd.  
 Proterial Machinery, Ltd.  
 Alcast, Ltd.

**Asia** HNV Castings Private Limited  
 Nam Yang Metals Co., Ltd.

### Waupaca

**North America** Waupaca Foundry, Inc.

### Piping Components Business Unit

**Japan** Kuwana Works  
 Kuwana Works R&D Center  
 Proterial FineTech, Ltd.

**North America** Ward Manufacturing, LLC

**Asia** Proterial Instruments (Shenzhen), Ltd.  
 Proterial Metals (Suzhou), Ltd.

### Magnetic Materials Business Unit

**Japan** Kumagaya Works  
 NEOMAX KINKI Co., Ltd.  
 NEOMAX ENGINEERING Co., Ltd.  
 NEOMAX KYUSHU Co., Ltd.  
 Santoku Corporation

**Asia** PT. NEOMAX MAGNETIC TECHNOLOGIES INDONESIA  
 San Technology, Inc.  
 Pacific Metals Co., Ltd.  
 Proterial Ke Huan Magnetic Materials (Nantong) Co., Ltd.

### Power Electronics Materials Business Unit

**Japan** Metglas Yasugi Works  
 Yamazaki Works  
 Applied Components Dept.  
 Proterial Ferrite Electronics, Ltd.

**North America** Metglas, Inc.

**Asia** Proterial (Thailand) Ltd.  
 Proterial Philippines, Inc.  
 Proterial (India) Private Limited  
 Guangzhou Proterial Jiushuikeng Electronics Factory

### Electric Wire & Cable Business Unit

**Japan** Ibaraki Works  
 Cable Materials Research Laboratory  
 Proterial Trading, Ltd.  
 Tonichi Kyosan Cable, Ltd.  
 Tohoku Rubber Co., Ltd.  
 Ibaraki Technos, Ltd.

**North America** Proterial Cable America Inc.

**Asia** Proterial Malaysia Sdn. Bhd.  
 Proterial Thai Enamel Wire Co., Ltd.  
 Proterial Vietnam Co., Ltd.  
 Proterial Cable (Suzhou) Co., Ltd.  
 Shanghai Proterial Cable Materials Co., Ltd.

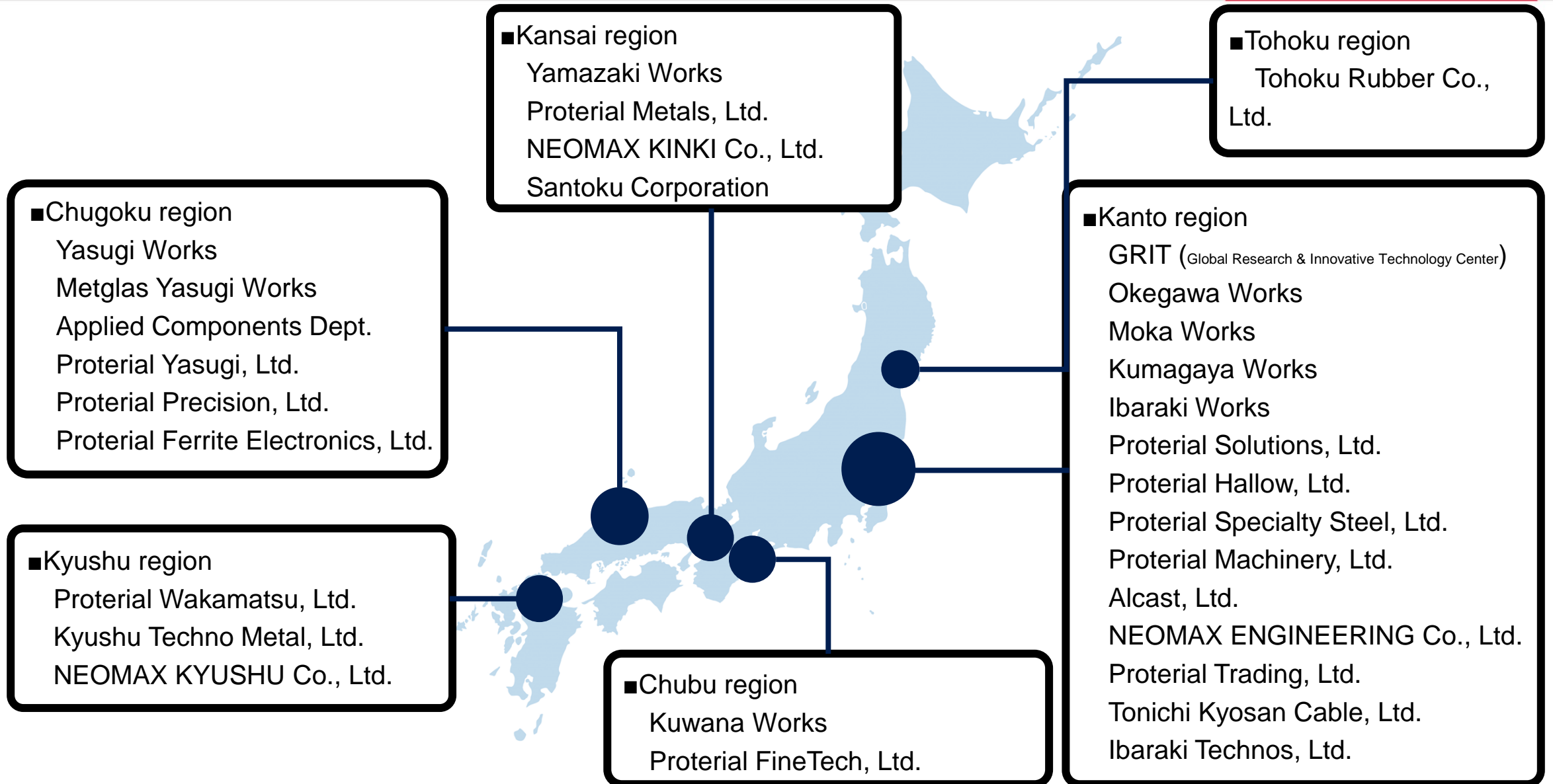
### Automotive Components Business Unit

**Japan** Ibaraki Works  
 Cable Materials Research Laboratory  
 Proterial Cable America Inc.

**North America** HC Queretaro, S.A. de C.V.

**Asia** Proterial (Thailand) Ltd.  
 Proterial (Thailand) Ltd. Chonburi Factory  
 Proterial Cable (Suzhou) Co., Ltd.

# Major Japan Bases





## ■ Europe

Proterial Europe GmbH

## ■ North America

Proterial America, Ltd.

**Diehl Tool Steel, Inc.**

Waupaca Foundry, Inc.

Ward Manufacturing, LLC

Metglas, Inc.

Proterial Cable America,  
Inc.

**HC Queretaro, S.A. de C.V.**

## ■ China, Hong Kong, Taiwan

Proterial (Shanghai), Ltd.

Proterial Hong Kong Limited

Proterial Taiwan, Ltd.

Proterial Specialty Steel (Dong Guan) Co.,Ltd.

Proterial Metals (Suzhou), Ltd.

Proterial Instruments (Shenzhen), Ltd.

Proterial Ke Huan Magnetic Materials (Nantong) Co.,  
Ltd.

Proterial Cable (Suzhou) Co., Ltd.

Shanghai Proterial Cable Materials Co., Ltd.

## ■ Asia (excluding China)

Proterial Korea Co., Ltd.

Nam Yang Metals Co., Ltd.

Pacific Metals Co., Ltd.

Proterial Asia Pacific Pte. Ltd.

Proterial (Thailand) Ltd.

Proterial Thai Enamel Wire Co., Ltd.

Proterial (India) Private Limited

HNV Castings Private Limited

Proterial Malaysia Sdn. Bhd.

Proterial Vietnam Co., Ltd.










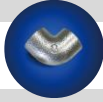








PT. NEOMAX MAGNETIC TECHNOLOGIES INDONESIA

San Technology, Inc.

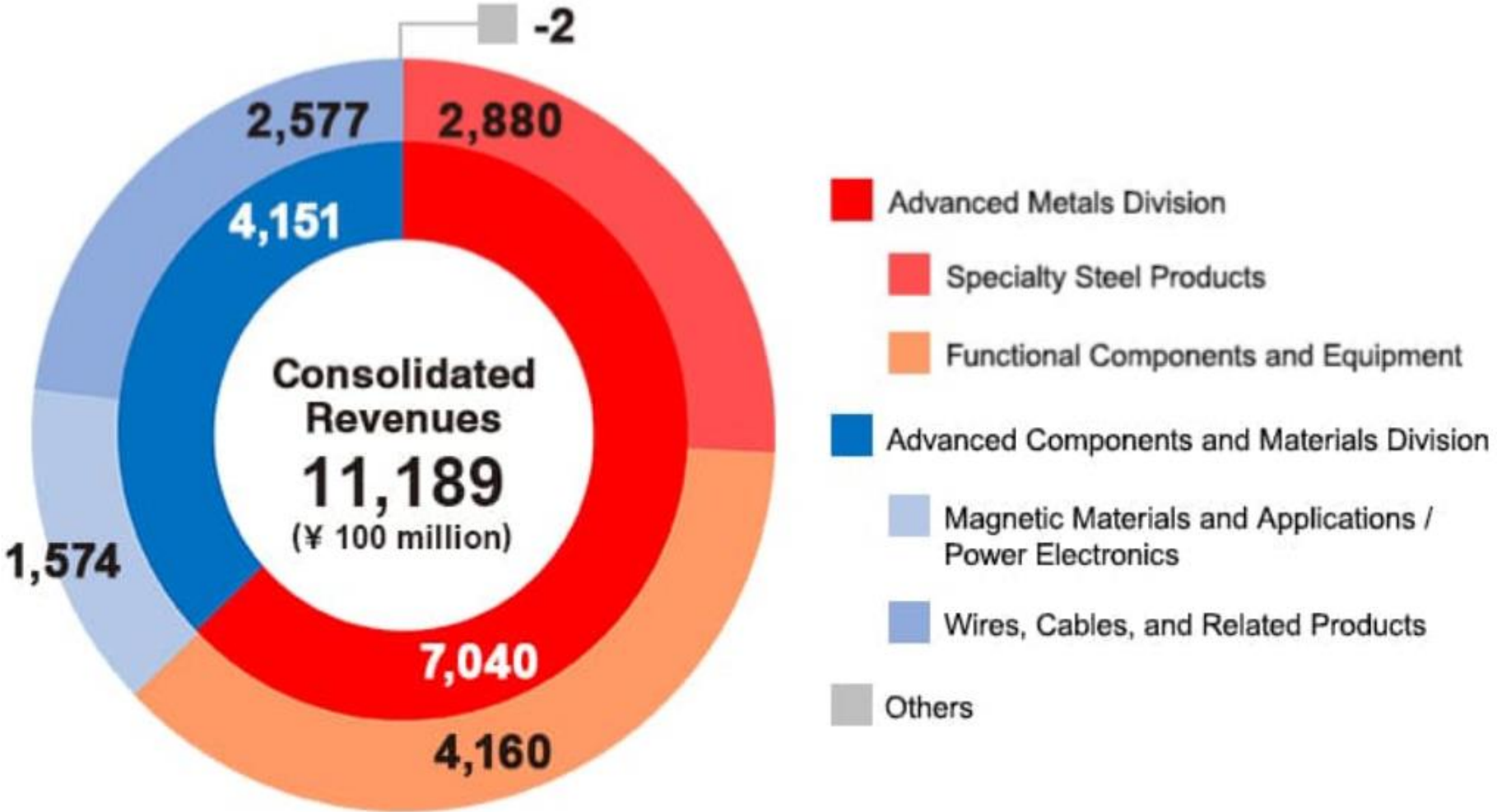
Proterial Philippines, Inc.

# Business Operations and Portfolio

The Proterial Group is a materials manufacturer that possesses competitive core technologies in the high-performance materials field. We offer global top brand products and develop various businesses related to the infrastructure areas, automobile, and electronics.

Market area	Infrastructure	Automobile	Electronics
<b>Specialty Steel</b>	 Turbine Cases  Tool Steel	 CVT Belt Materials	 Clad Materials  Lead Frame Materials
<b>Rolls</b>	 Rolls for Steel Mills		
<b>Automotive Casting</b>		 Cast Iron  Heat-resistant cast components [HERCUNITE™]	
<b>Waupaca</b>		 Iron casting products for transportation machinery	
<b>Piping Components</b>	 Pipe Fittings  Polyethylene gas piping systems		
<b>Magnetic Materials</b>		 Neodymium Magnets [NEOMAX®]	 Ferrite Magnets [NMF™]
<b>Power Electronics Materials</b>	 Amorphous Alloys [Metglas®]		 SiN Substrate
<b>Electric Wire &amp; Cable</b>	 Rolling Stock Cables  Industrial Robot Cable		
<b>Automotive Components</b>		 Harness for Electric Parking Brakes	

# Revenue by Business Segment (as of March 31<sup>st</sup>, 2023)



# PROTERIAL

**SPECIALTY STEEL** BUSSINESS UNIT

\*The Hitachi Metals brand name is updated to Proterial.



Molds and tool steel >



Industrial Materials >



Aerospace & Energy Materials >



Electronic Materials >



Metal Additive Manufacturing (3D Printing) >



Rolls >



Automotive Casting >



Piping Components >



Magnetic Materials >



Soft Magnetic Materials and Components >

# PROTERIAL



## TOOL STEEL MEXICO

\*The Hitachi Metals brand name is updated to Proterial.



■ **Proterial Tool Steel Mexico** is strategically located in Center Mexico to support the **Specialty Steel** demand for all our customers in Mexico .

Our facilities are located in the city of **Querétaro, Querétaro.**



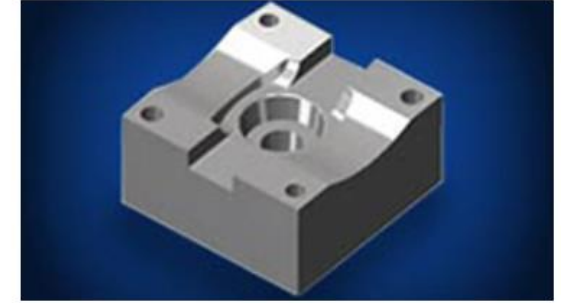
**Steels for Cold Working  
Molds** >



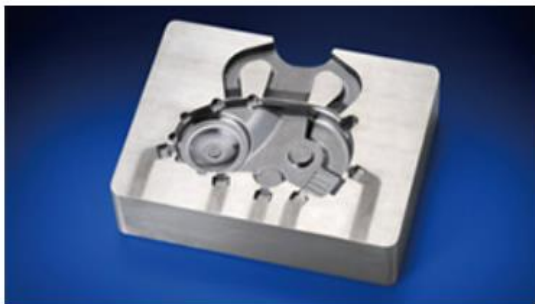
**High Performance Cold  
Working Tool Steel SLD-  
MAGIC™** >



**Steels For Diecast Molds**  
>



**Functional Surface  
Modification PVD coating  
processes Tribec™** >



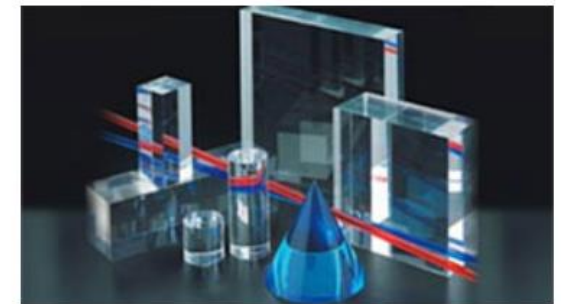
**Advanced Die Steel for  
Die Casting DAC-MAGIC™**  
>



**Hot Extrusion Die  
Materials / Extrusion  
Tools** >



**Steels For Hot Working** >



**Steels For Plastic Molds** >

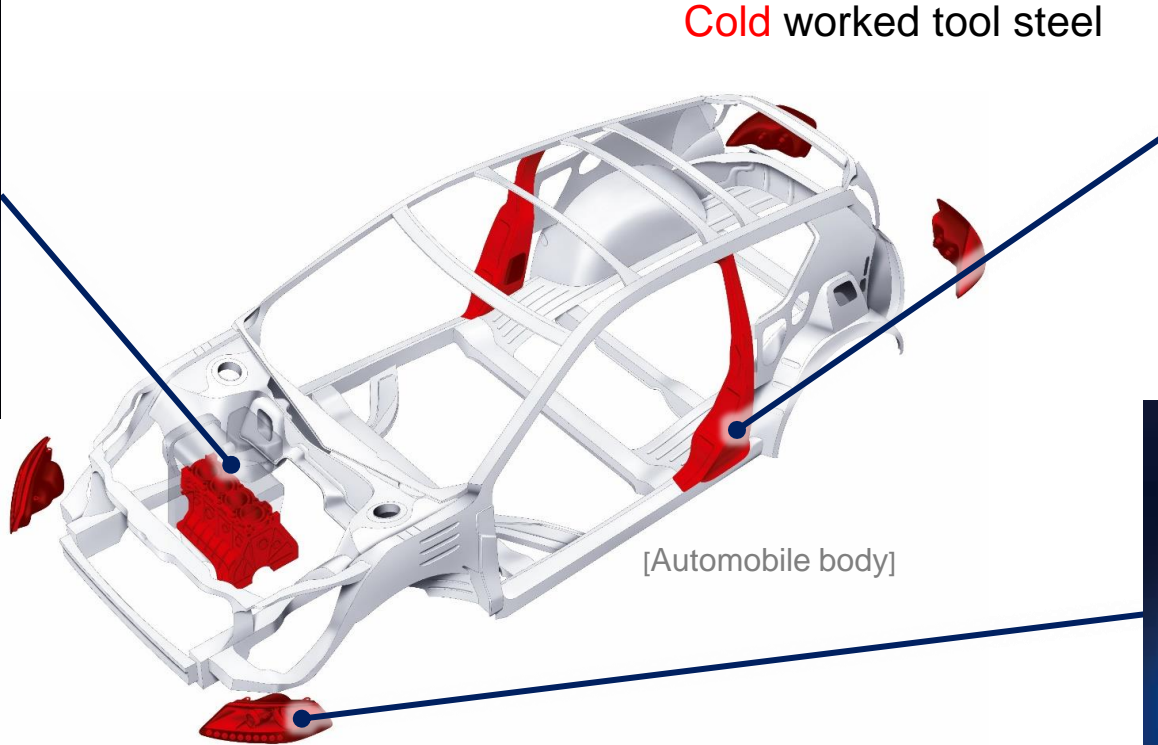


## Comprehensive global solutions for a wide range of applications

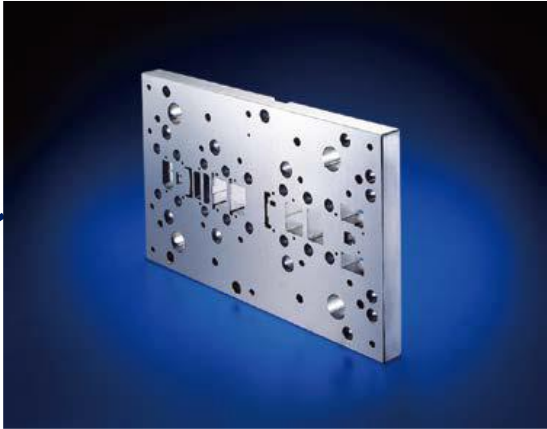
We meet the needs of our customers for tools with long life or improved environmental response by proposing the most appropriate tool steel with high quality finishes. We take advantage of intelligent alloy design, and advanced melting and hot-working processes.



Hot worked tool steel



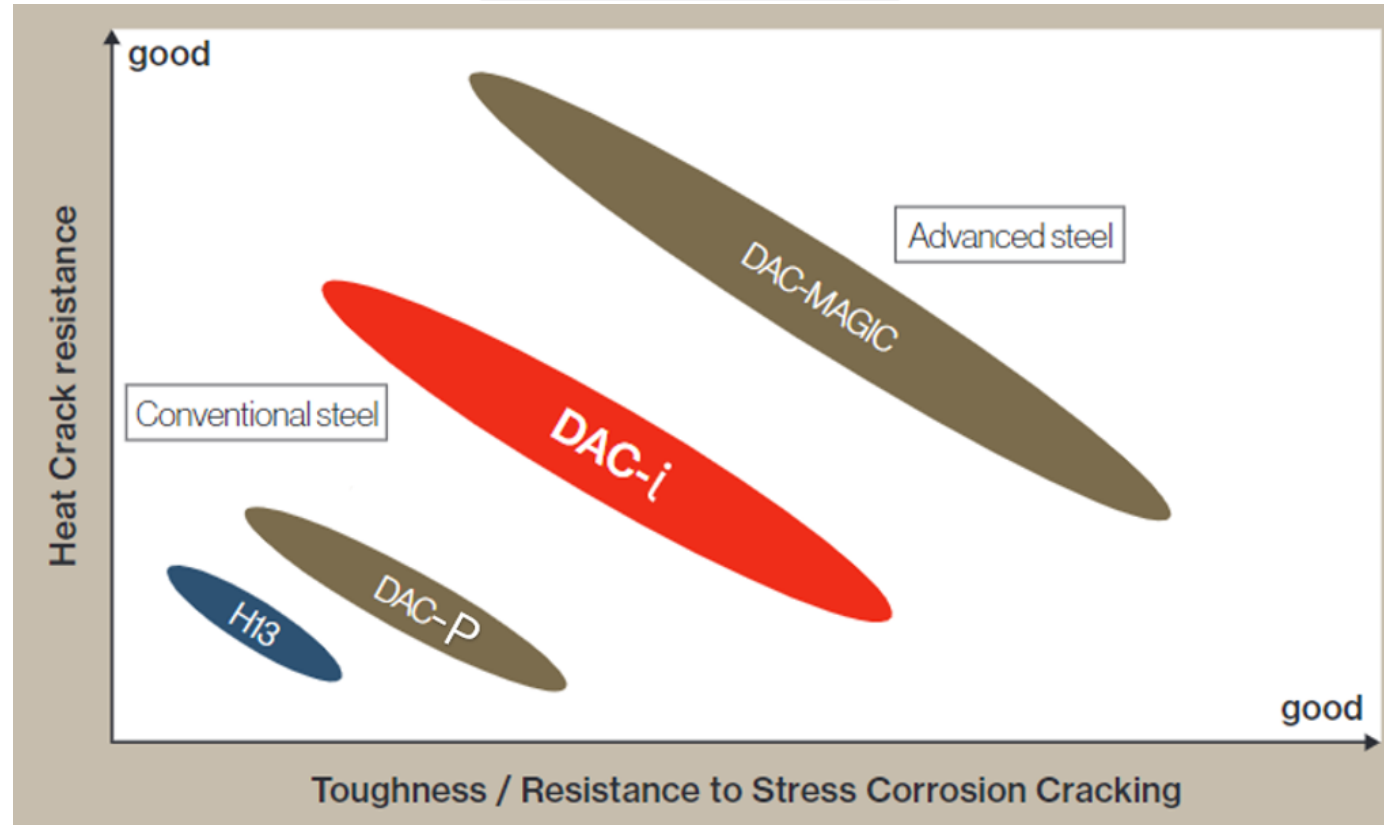
Cold worked tool steel



Plastic Mold Steel



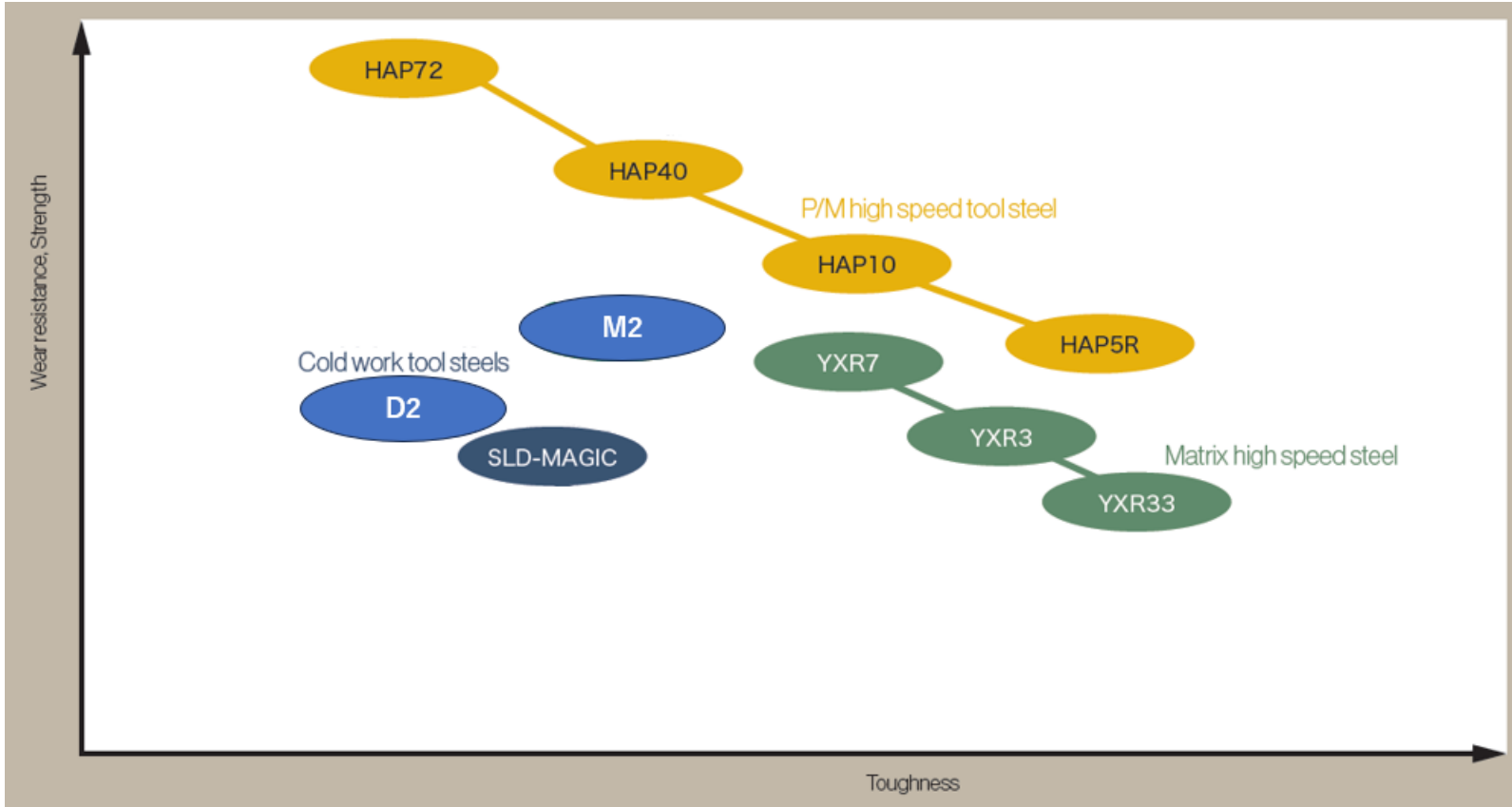
**DAC-MAGIC**  
**DAC-i**  
**DAC-P**



# Cold worked Tool Steel & High Speed Steel



YXR7, YXR3, YXR33  
SLD-MAGIC



A-2	D-2	S-7	H-13	O-1	L-6	O-6
A-6	A-8	A-10	H-13 Premium	Vertex	S-1	S-5

### MOLD STEEL

P-20 PHT	H-13 NADCA	17-4 SS	420 STAINLESS MQ ESR	P-20 HI HARD
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### ALLOY STEEL

4140 SUPER BRAKE DIE <i>27-35 Rc/Decarb Free</i>	4140 ANLD <i>Decarb Free Plate</i>	4150 H.T. BLOCK <i>27-35 Rc/Decarb Free</i>	6150	8620
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### CARBON STEEL

A-36 PLATE <i>Stress Relieved-Ground</i>	A-36 HOT ROLL PLATE <i>Stress Relieved</i>	1018 COLD ROLL <i>Bar Stock</i>
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### POWDER METAL PRODUCTS

1V	3V	9V	10V	15V	S90V
REX 45	M-4	REX 76	REX T-15	A-11	REX M-4

### HIGH SPEED STEEL

M-2	M-4	M-42	T-1	T-15
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### PRECISION GROUND FLAT STOCK

W-1	O-1	A-2	D-2	S-7	A-6	M-2
LOW CARBON		4140 H.T.		410 SS		440C SS

### DRILL ROD

W-1	O-1	A-2	D-2	S-7	H-13	M-2
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### STAINLESS AND ALUMINUM

410 SS	416 SS	420 SS	440C SS	6061 ALUM
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A Proterial Group Company

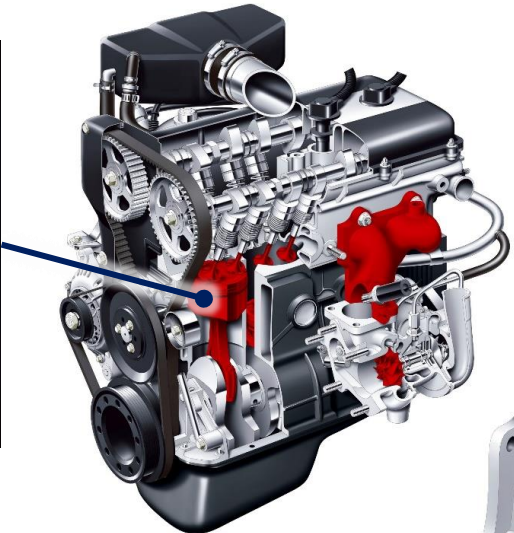


## Continuously challenging ourselves to meet changing needs

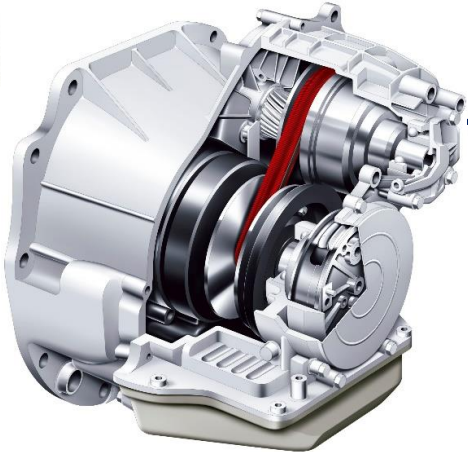
To gain improvements in fuel efficiency and energy saving, today’s vehicles demand greater performance from their steel components. From engine parts to transmissions and turbo-chargers, we provide solutions with excellent functional characteristics. For many years, we have been known for the outstanding quality of our piston ring and engine valve materials. We responds to our customers’ needs worldwide.



Piston Ring Materials



[Engine]



[CVT]



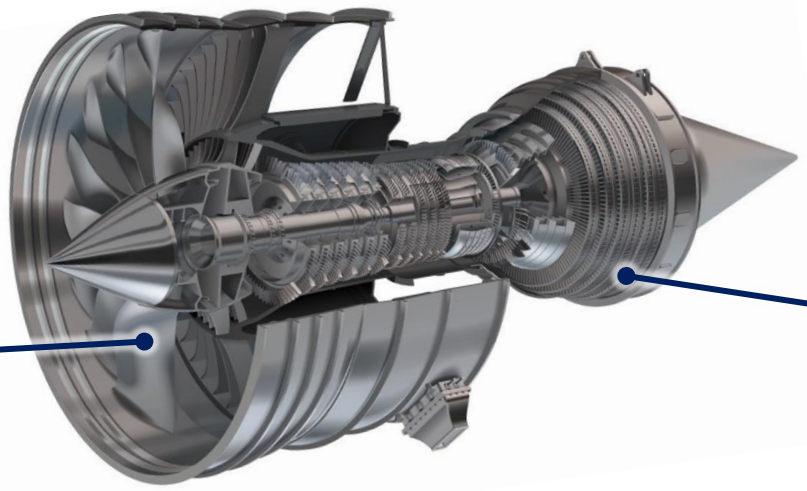
CVT Belt Materials

**Contributing to future innovations in the aircraft and energy industries through advanced technology and a long term perspective on quality**

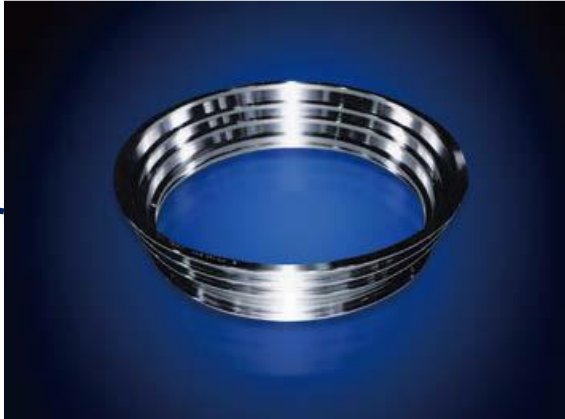
Few applications are more demanding than aircraft and power plants, which need materials that must perform unflinching in severe environments. Through decades of advance in material technology, quality assurance and research and development, we are able to provide highly reliable materials and services that will serve our customers for years ahead. With our unique melting technology and manufacturing processes, we will continue to provide valuable products and contribute to innovations in the global aerospace and energy industries.



Shaft



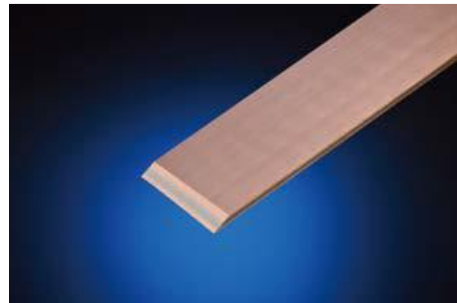
[Aircraft Engine]



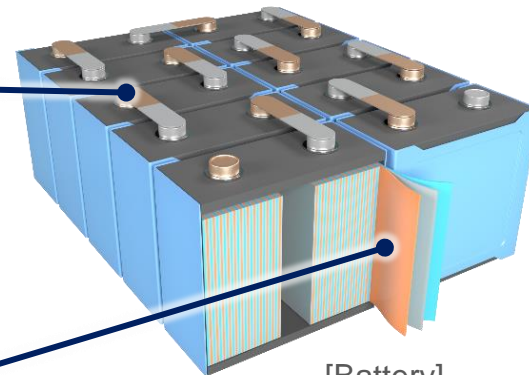
Turbine Cases

High performance metal products, with consistent production technology, from development and sample making to mass production, to meet the latest needs of our customers

Our electronics-related products fulfil an essential role in a wide range of applications, such as audio-visual equipment, IT devices, automobiles, batteries, and home appliances. To help realize a sustainable society, we supply high-performance steel products that make best use of our technical capability and consistent engineering processes from development and sample making to mass production.



Clad Materials



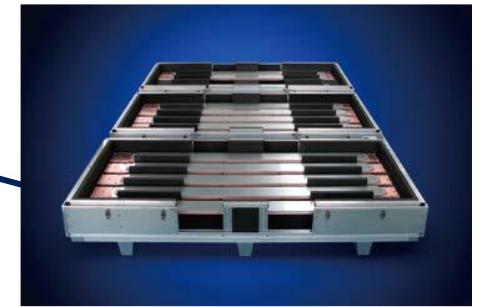
[Battery]



[Smartphone]



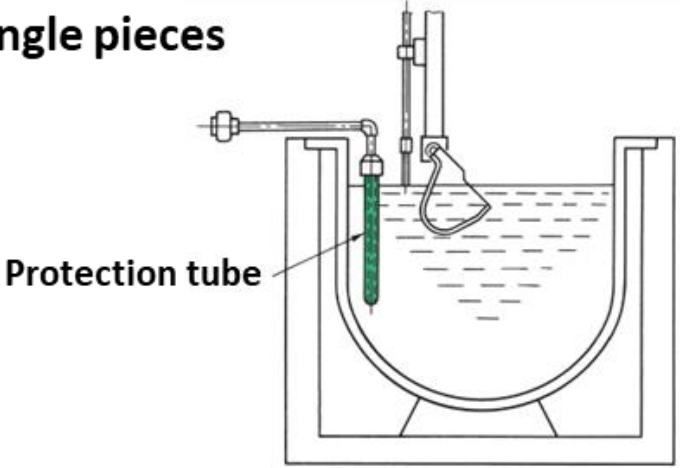
Materials for OEL Panels



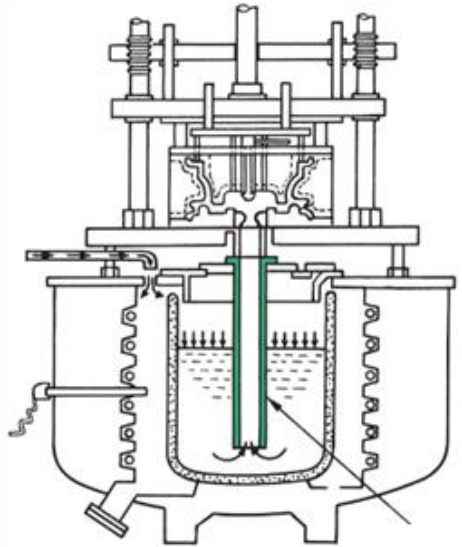
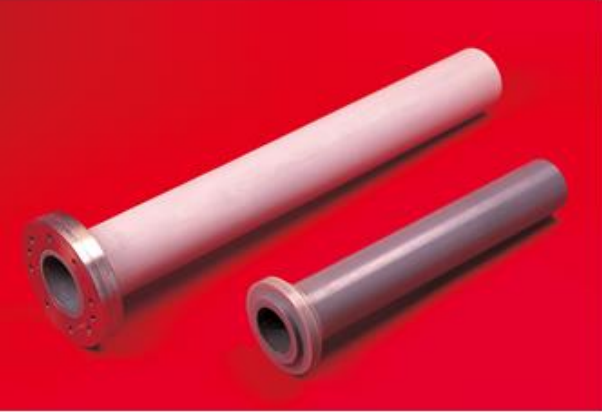
Sputtering Target Materials



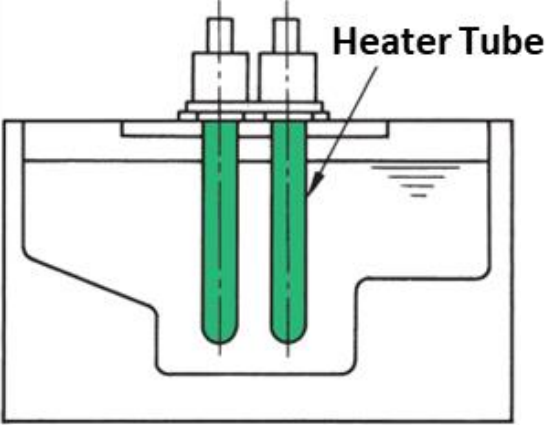
### ● Sialon protection tube-single pieces



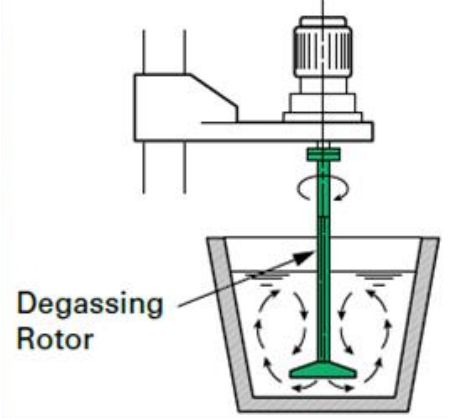
### ● Stalk



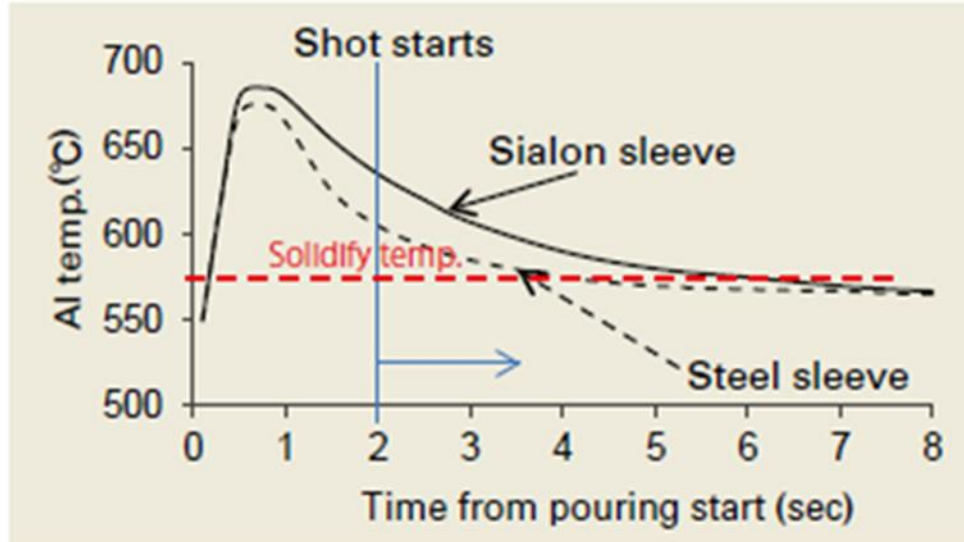
### ● Heater Tube



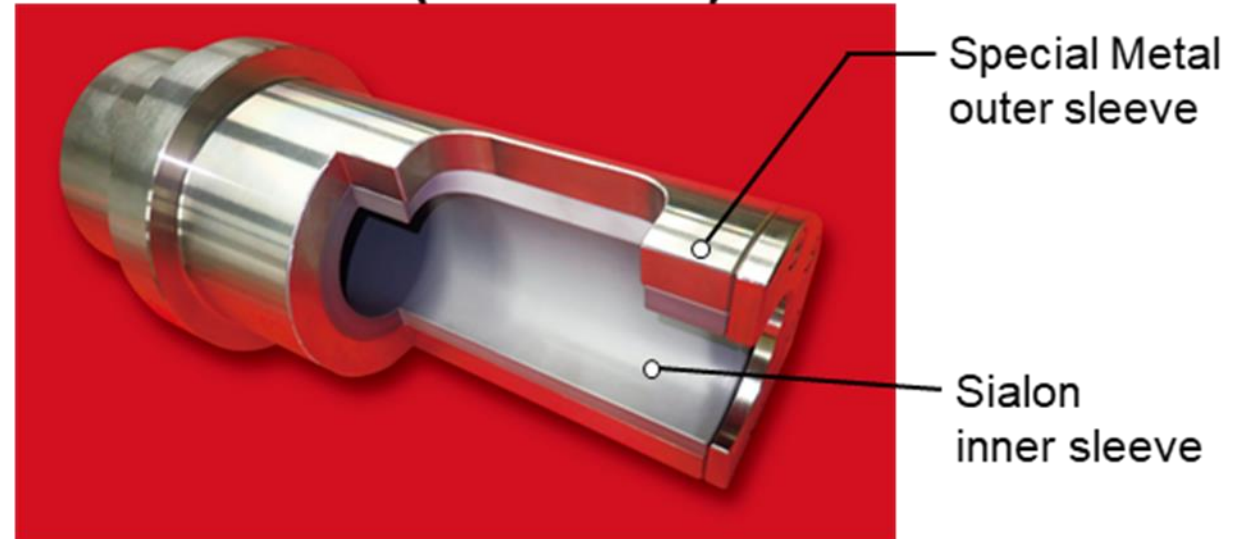
### ● Degassing Rotor



## ● Heat-retention

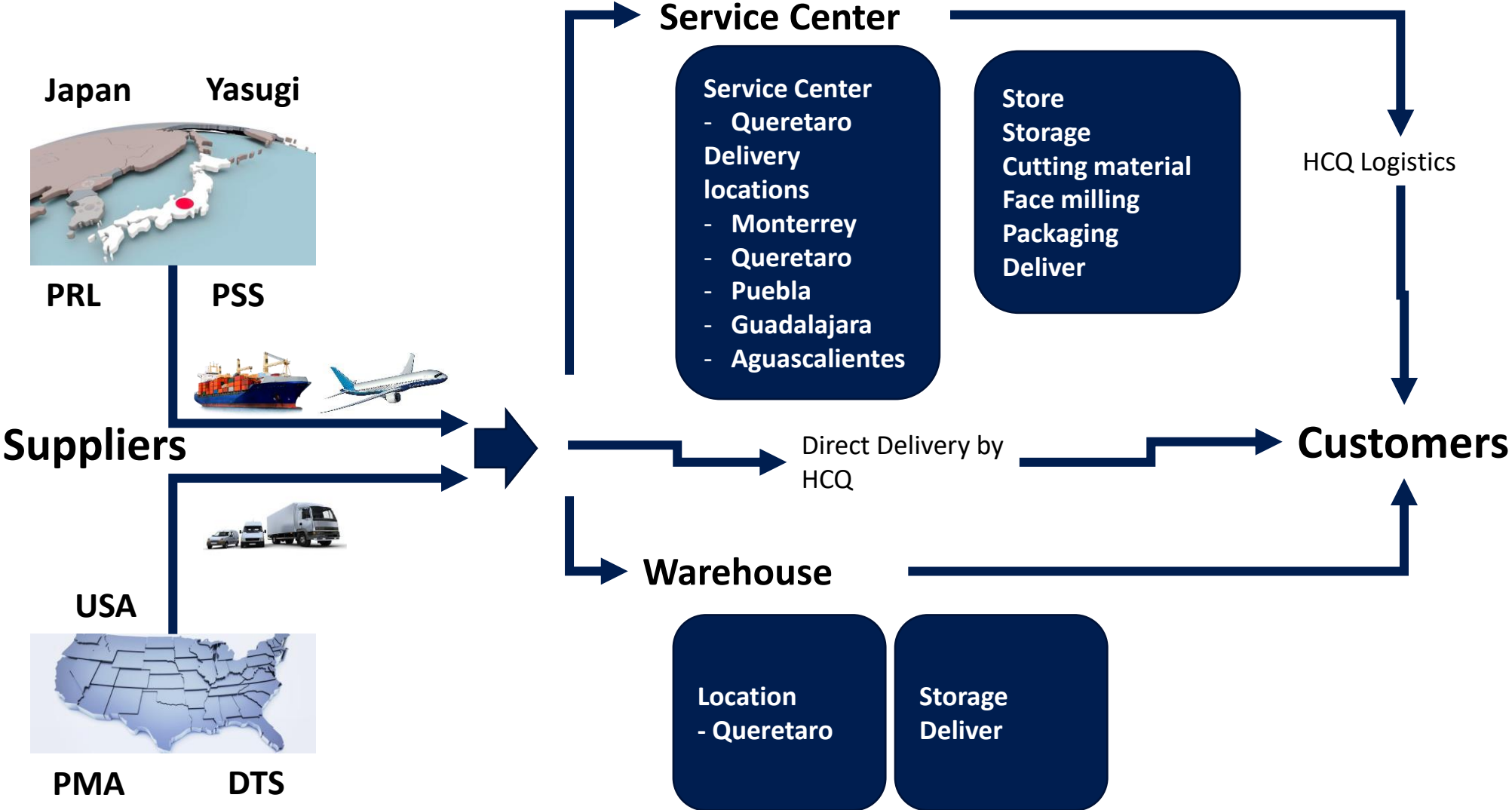


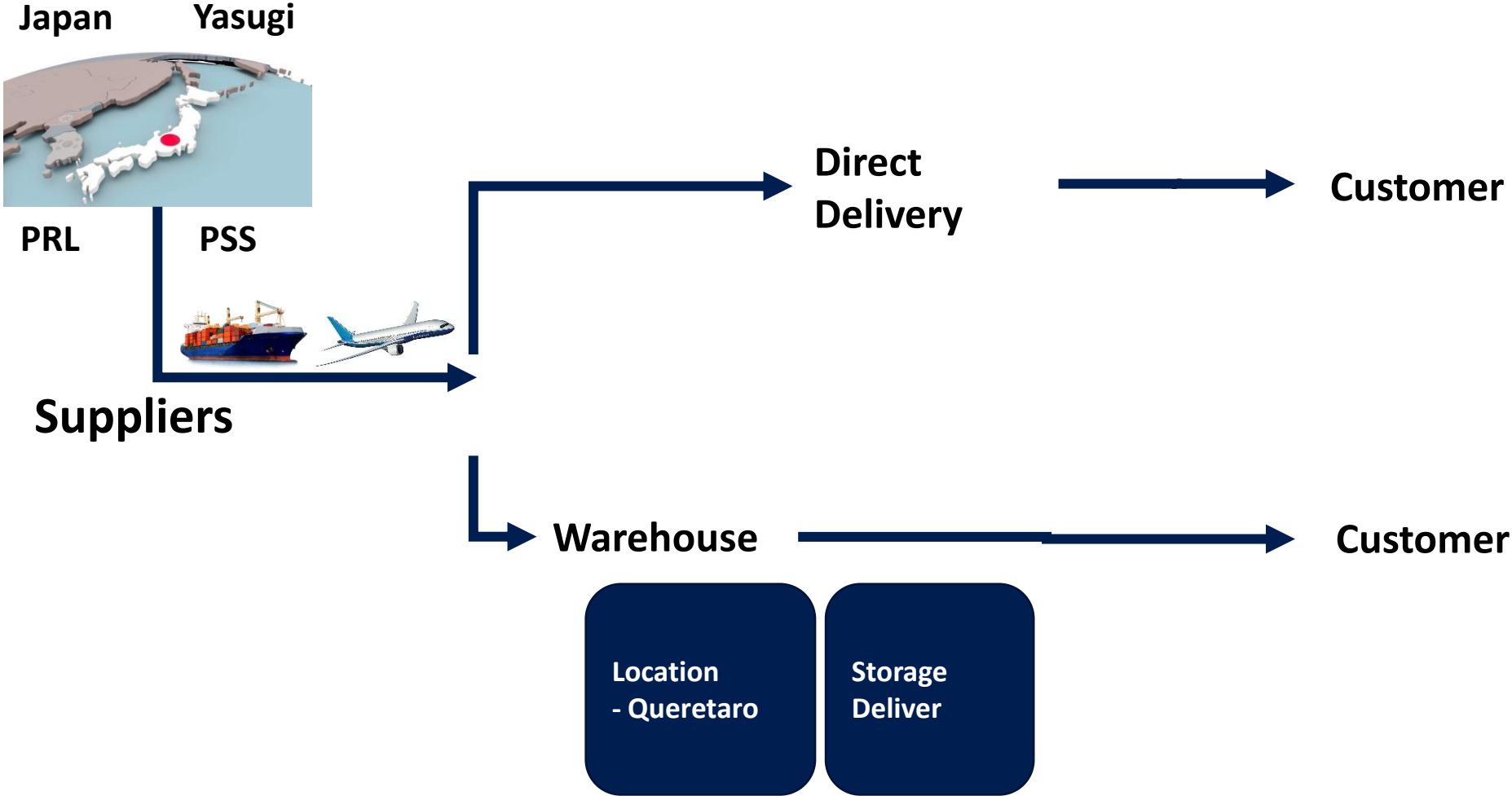
## ● Shot Sleeve (Cut Model)

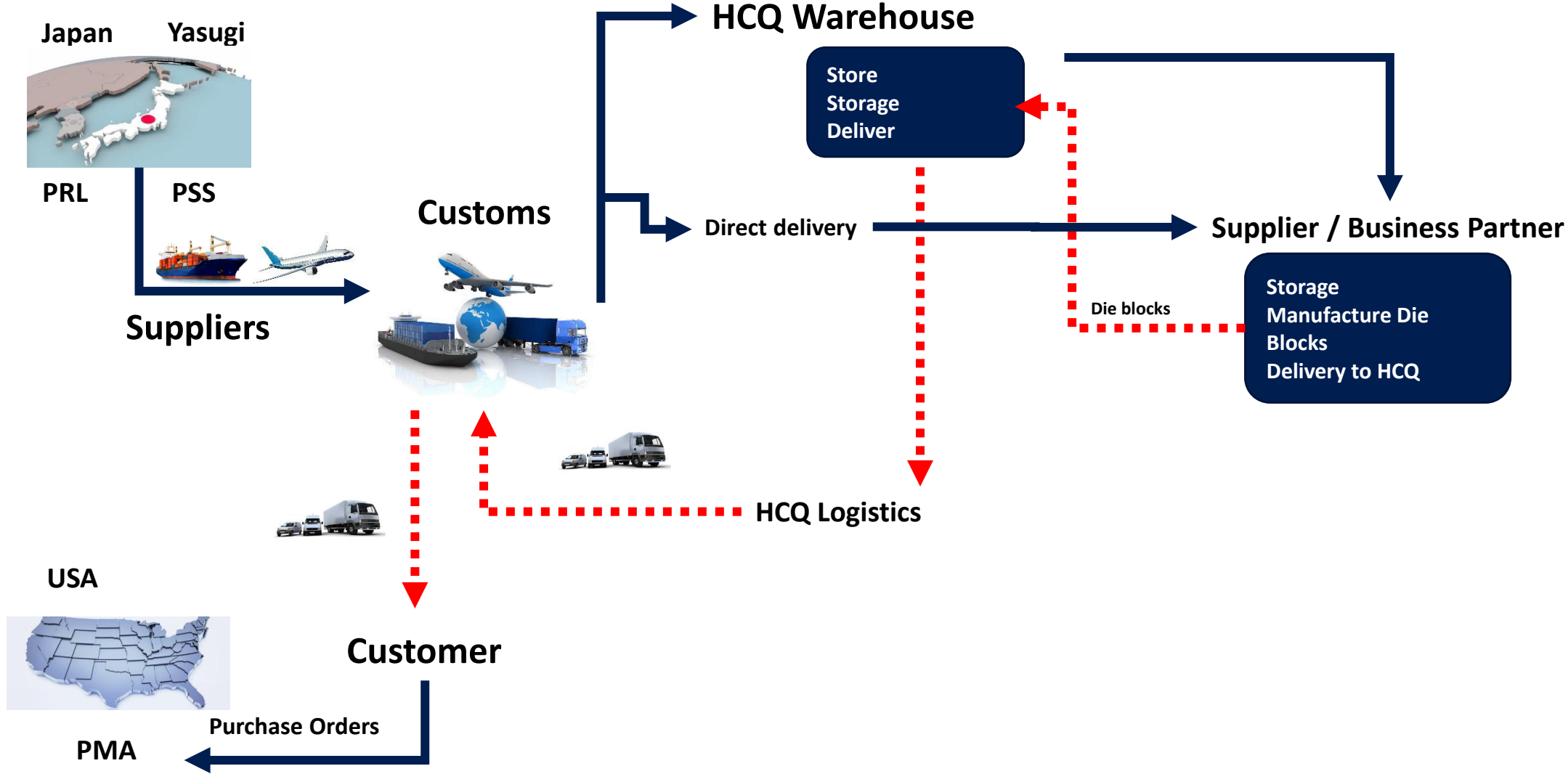


Materials	Density (g/cm <sup>3</sup> )	4 point Bending strength (MPa)	Young's modules (GPa)	Thermal shock resistance (ΔT°C)	Coefficient of thermal expansion (×10 <sup>-6</sup> /°C) [20~800°C]	Thermal conductivity (W/m·k)	Maximum allowable temperature (°C)
Sialon	3.2	750~950	290	710	3.0	17	1,250
Super Sialon	3.2	800~1050	300	750~1000	3.0	65	1,250

Sialon and Super Sialon are used primarily for the production of parts that come into contact with molten aluminum. The characteristics of Sialon are given below in comparison with those of structural ceramics.





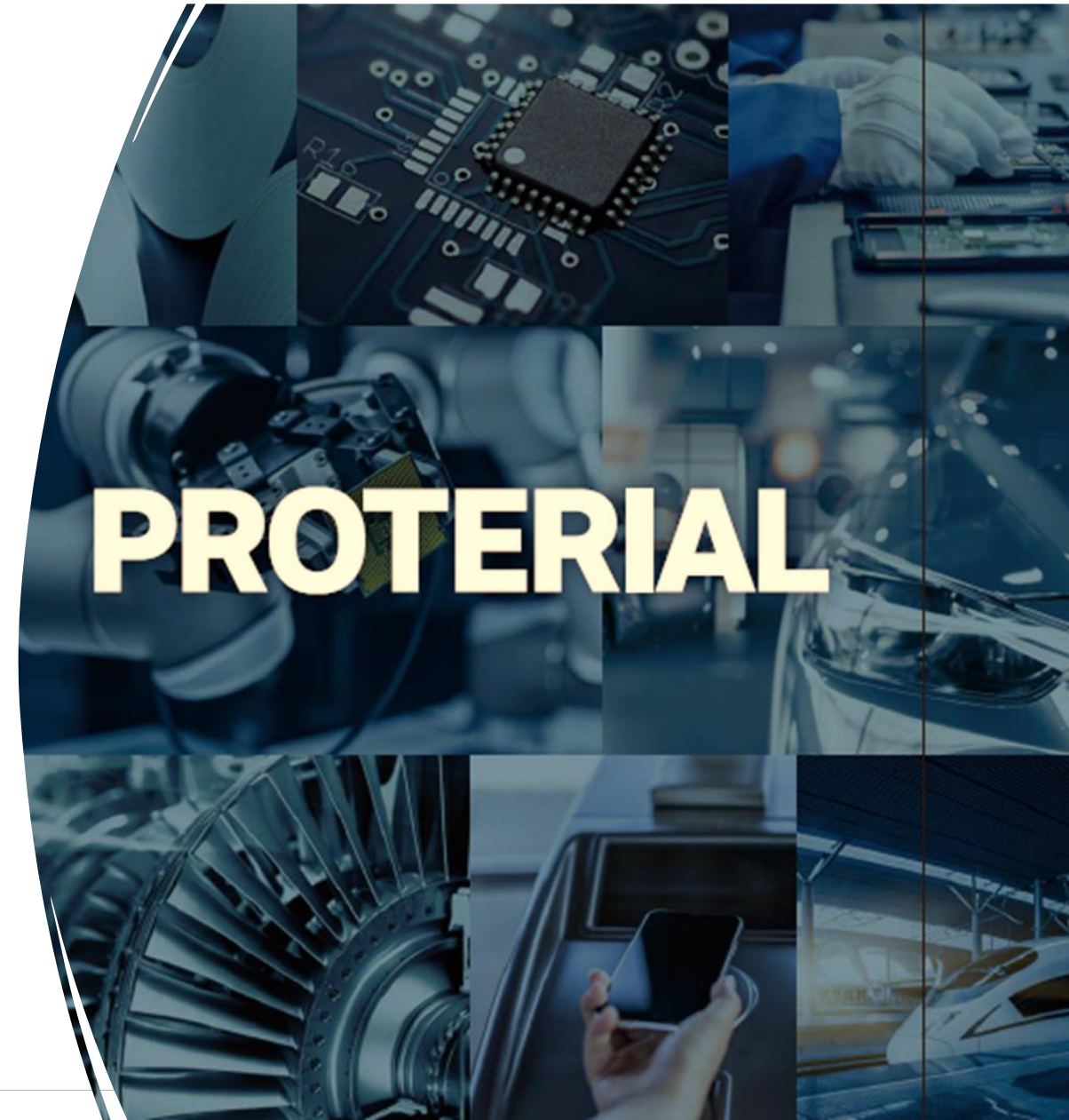


# Customers

# PROTERIAL



- Mauricio Gonzalez – General Manager  
[mauricio.gonzalez@hcq.proterial.com](mailto:mauricio.gonzalez@hcq.proterial.com)
- Karim Merchán – Sales & Technical Manager  
[karim.merchan.pz@hcq.proterial.com](mailto:karim.merchan.pz@hcq.proterial.com)
- Alex Okamura - Senior Business Development Manager  
[alex.okamura@us.proterial.com](mailto:alex.okamura@us.proterial.com)
- Larissa Malo – Sales Support – Metals Division  
[larissa.malo.sz@hcq.proterial.com](mailto:larissa.malo.sz@hcq.proterial.com)
- Fernanda Frías – Sales Support – Metals Division  
[fernanda.frias.sn@hcq.proterial.com](mailto:fernanda.frias.sn@hcq.proterial.com)



# **PROTERIAL**



**THANK YOU !**