

Business Outline

Iron & Steel Business

Strengthening manufacturing capabilities for advanced, high value-added products

Consisting of steel products, steel castings and forgings, titanium, steel powder and wholesale power supply, the Iron & Steel Business is strengthening its *monozukuri-ryoku*, or manufacturing capabilities, to increase productivity and cost competitiveness. It is looking to overseas markets for its "Only One" products and technologies and shifting its focus to fields of growing demand. In the wholesale power supply business, Shinko Kobe Power Inc. is equipped with a maximum output of 1.4 million kilowatts that provides a stable supply of electricity.



Main Products and Services

Steel Products

[Steel Wire Rod and Bar]

- Ordinary steel wire rod
- Special steel wire rod
- Ordinary steel bar
- Special steel bar

[Steel Plate]

[Steel Sheet]

- Hot-rolled steel sheet
- Cold-rolled steel sheet
- Electrogalvanized steel sheet
- Hot-dipped galvanized steel sheet
- Pre-painted steel sheet

[Pig Iron]

Steel Castings and Forgings

[Ship Parts]

- Crankshafts
- Engine parts
- Shafts
- Ship hull parts

[Industrial Machinery Parts]

- Mold steel
- Work rolls
- Bridge parts
- Heavy-wall pressure vessels

Titanium

- Titanium for aircraft parts
- Titanium for heat exchangers
- Titanium for construction
- Titanium for golf clubs
- Titanium for motorcycle mufflers
- Titanium for wristwatches
- Titanium for IT applications

Steel Powder

- Steel powder for powder metallurgy
- Steel powder for handwarmers
- Steel powder for deoxidizers
- Iron powder for soil remediation and groundwater purification
- Magnetic iron powder
- Fine powder for metal injection molding

Wholesale Power Supply



Parts made of cold-forged steel



Steel plate for shipbuilding



Titanium motorcycle muffler

Business Review

Kobe Steel, U.S. Steel begin commercial production at continuous annealing line of PRO-TEC joint venture in Ohio

In May 2013, Kobe Steel and United States Steel Corporation announced that the continuous annealing line at their joint venture, PRO-TEC Coating Company, had commenced commercial production of advanced high-strength steel sheet for automobiles.

More stringent CAFE (corporate average fuel economy) standards are increasing the need for automakers to make lighter cars. Advanced high-strength steel reduces vehicle weight without sacrificing collision safety. These trends are accelerating demand for high-strength steel sheet for automobiles.

The continuous annealing line is equipped with both advanced water quench equipment and a rapid gas jet cooling system, which enables the new facility to produce a wide range of cold-rolled high-strength steel currently used in the automobile industry. The new line will be able to make next-generation high-strength steel products with outstanding formability. A major product is steel sheet with a tensile strength of 590 MPa.



Continuous annealing facility at PRO-TEC now in operation

“Only 1” Products & Technologies



Wire Rod for Automotive Engine Valve Springs

With an excellent balance of integrated capabilities in manufacturing, processing and product development, Kobe Steel has a large share of the domestic and overseas markets for wire rod used in engine valve springs and suspension springs, steel for bearings and gears, and cold heading quality (CHQ) wire rod for nuts and bolts.



Crankshafts (Build-Up Type)

A rotating shaft, or a journal, and a component connected to a piston, called a throw, are produced separately and later assembled into a crankshaft. Manufactured under stringent quality control, our built-up crankshafts are unmatched in precision and delivered on time.



High-Strength Steel Sheet

Kobe Steel is the first manufacturer in the industry and in the world to successively commercialize high-strength steel sheet, which reduces car weight and provides greater protection in the event of collision. Kobe Steel has successfully prototyped steel sheet with the world's highest tensile strength.

The line will be capable of producing ultra high-strength steel of 780 MPa, 980 MPa and higher. These steel products also help decrease fuel consumption by reducing the weight of cars and help lower greenhouse gas emissions.

Kobe Steel's wire rod processing company starts up in China

Kobelco Spring Wire (Foshan) Co., Ltd. (or KSW), established by Kobe Steel, Ltd. with equity participation from Shinko Wire Company, Ltd. and Suncall Corporation, began production of steel wire for high-quality springs in February 2013.

In China, where auto production is forecasted to expand considerably over the medium to long term, the world's major spring manufacturers have been aggressively building new local production lines and expanding capacity to meet increased production of engine valve springs and other high-quality springs. This, in turn, has increased demand for high-quality steel wire, the material from which springs are made.

Kobe Steel has a roughly 50% share of the world market for steel wire rod, the base material for steel wire, used in making engine valve springs. It has earned high marks from automakers in



KSW facility

Japan, the United States and Europe for its wire rod. With the operation of its plant, KSW will steadily meet booming demand for high-quality steel wire for valve springs in China.

New steel plate heat-treatment furnace begins operation

Kobe Steel completed the expansion of its new heat treatment furnace as a measure to increase Kakogawa Works' steel plate heat treatment capacity. Operation of the new furnace began in January 2013. Demand for heavy plate, which is used in LNG tanks, pressure vessels and other applications, has been steadily increasing due to rising global energy demand, especially from emerging countries.

Heat treatment capacity has nearly doubled with the installation of the new heat treatment furnace. We will seek to raise our market presence and improve earnings by increasing order volume in the energy field.



New heat treatment furnace