

East Nippon Works Kashima Area



最先端の技術で、高品質の鉄を高い生産性でつくる東日本製鉄所 鹿島地区

East Nippon Works Kashima Area – Producing High-Quality Steel with Advanced Technology and Superior Productivity

東日本製鉄所
鹿島地区
East Nippon Works
Kashima Area

鉄は人類の進歩を支えてきました。古代から現代にいたる歴史のなかで、文明を栄えさせてきたのは、鉄の豊かな使い方でした。いつの時代にあっても、鉄が不可欠な素材であり続けた理由は、すばらしい適応力です。今日も、先端技術の集約といえる自動車に重量の7割以上鉄が使われていることから、その重要性和、可能性がうかがえます。

日本の鉄のルーツは、ここ鹿島です。古くは、奈良時代の常陸風土記に「若松の浜（鹿島）の鐵^{まがね}を採りて剣を造りき」と記されています。この古代製鉄ゆかりの地に、1968年、近代的な東日本製鉄所 鹿島地区が開所しました。

東日本製鉄所 鹿島地区の特色は、工程の合理化による生産性の高さと、時代の変化に対応した高付加価値化・多品種化製品です。なかでも生産量の80%を占める鋼板は、表面処理鋼板を中心に、年々製品が高級化しています。

また、生産面だけでなく、自然にやさしい鉄づくりを心がけ、海、川、土地など、周辺の環境を大切にするグリーンな製鉄所をめざしています。

Throughout the annals of human history, the development and utilization of iron has paralleled the growth of civilization itself. The strength and adaptability of steel has made it the most important base material in all ages, and the 1990s are no exception.

East Nippon Works Kashima Area, one of the world's largest and most efficient integrated steel works, is located in the coastal region of Kashima--the true cradle of Japanese steelmaking. From ancient times, the people of Kashima gathered iron sand from the dunes along the sea, with artisans then transforming this material into iron. It was in this very locale that Sumitomo Metal Industries founded its most modern and streamlined steel works in 1968.

East Nippon Works Kashima Area specializes in the manufacture of sheet, coil and plate steel--varieties which make up some 80 percent of its total production. The works produces an impressive line of sophisticated sheets and colls, all designed to which meet the increasingly diversified demands of the age.

Forging an age of steel production which is friendly to the earth and the ecosystem, Nippon Steel carries on the quest to save energy, conserve resources, and protect the natural environment.



東日本製鉄所 鹿島地区の沿革

History of East Nippon Works Kashima Area (Year of Completion)

1961	茨城県「鹿島臨海工業地帯造成計画」策定
1963	鹿島港起工
1968.12	鹿島製鉄所発足
1969	鹿島港開港
1969. 4	熱延工場完成(操業開始)
1971. 1	銑鋼一貫体制の確立(高炉火入れ・製鋼工場完成)
1988. 9	累計出銑量1億トン達成
2003.10	累計出銑量2億トン達成
2004. 9	新第一高炉火入れ
2011. 3	東日本大震災により鹿島製鉄所被災
2012.10	新日鐵住金株式会社発足
2017. 7	累計出銑量3億トン達成
2018.12	鹿島製鐵所創立50周年
2019. 4	日本製鉄株式会社へ商号変更
2020. 4	東日本製鉄所鹿島地区発足

1968.12	Foundation of Kashima Works Organization by Sumitomo Metals
1969	Opening a Kashima Public Port
1969. 4	Start Production of Hot Strip Mill
1971. 1	Start Production of Upstream Facility ～Establishment of integrated Steel making process～
1988. 9	Accumulated Crude Steel Production : reach to 100million tons
2003.10	start production of rebuilt No.1 Blast Furnace
2004. 9	Accumulated Crude Steel Production : reach to 200million tons
2011. 3	Extensive damage by The Great East Japan Earthquake, Stepwise Recovery of Production Within about 2months
2012.10	Foundation of Nippon Steel & Sumitomo Metal Corporation
2017. 7	Accumulated Crude Steel Production : reach to 300million tons
2018.12	The 50th Anniversary
2019. 4	Change of trade name to Nippon Steel
2020. 4	Foundation of East Nippon Works Kashima Area



鉄の製造工程

Manufacturing Processes of Steel



1 高炉
Blast Furnace



2 転炉
Converter



3 連続 casting 機
Continuous Casting Machine



4 熱延仕上げ圧延機
Hot Strip Mill



5 No.2冷間圧延機
No.2 Cold Strip Mill



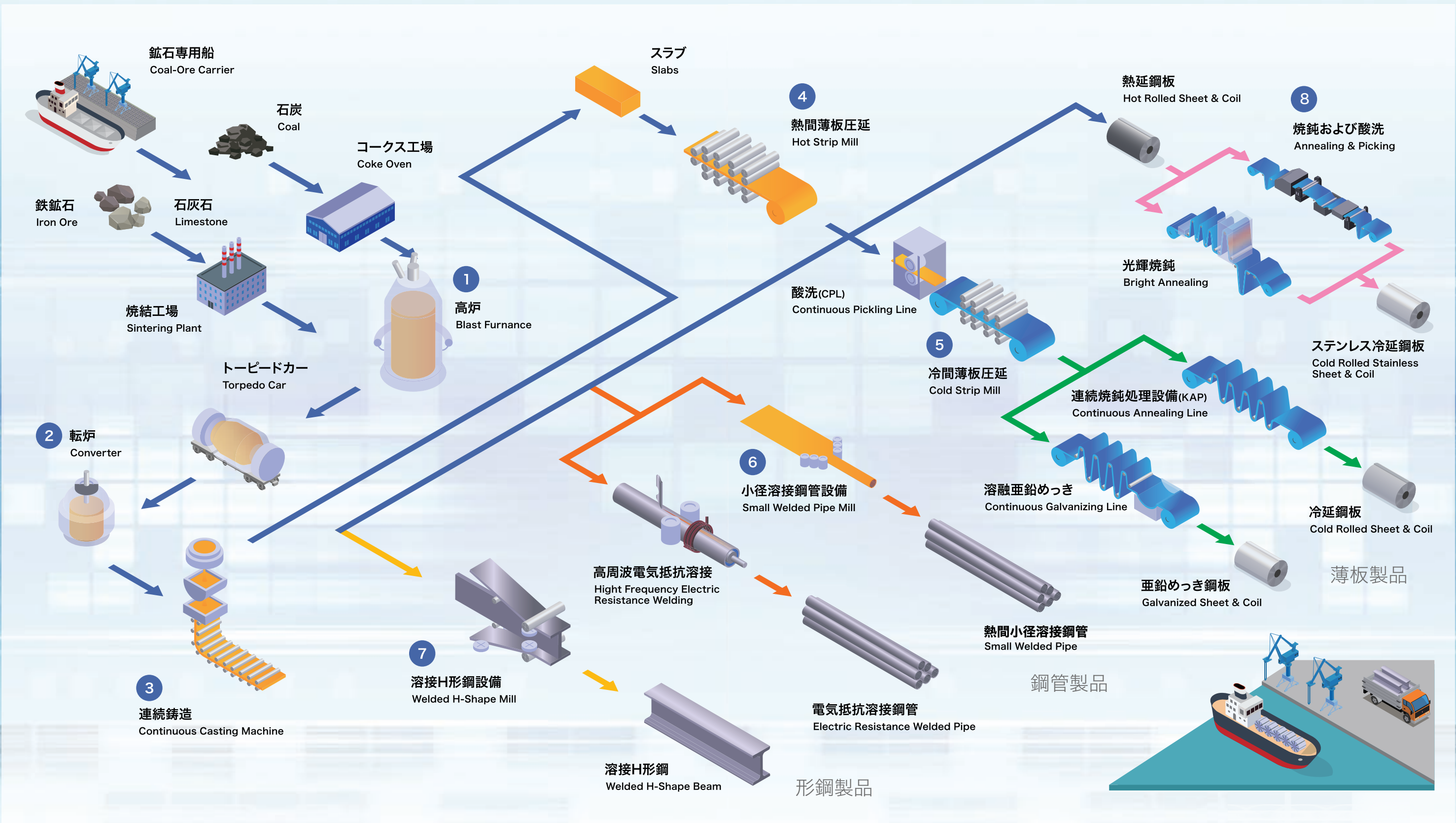
6 小径溶接鋼管設備
Small Welded Pipe Mill



7 溶接H形鋼設備
Thermatool Welded H-Shape Mill



8 焼鈍酸洗ライン (2AP)
Annealing & Pickling





炉内状況をコンピュータで管理し、高品位の銑鉄を産みだす世界最大級の高炉

The World's Largest Scale Blast Furnaces, Computer-controlled To Premium Quality Iron

鉄をつくる主な原料は、鉄鉱石、石炭、石灰石で、石灰石以外はすべて海外からの輸入です。鉄鉱石は、通常粉状で、コークス粉と石灰石を混ぜて、一定の大きさに焼き固め、焼結鉱をつくります。石炭は、蒸し焼きにしてコークスにします。この工程により、高炉の操作性が大幅に向上しました。

巨大な高炉では、鉄鉱石とコークスを交互に装入させながら、炉内に1200℃の熱風を吹き込んで、溶けた鉄（銑鉄）をつくります。炉内には、数多くのセンサーが設置されていて、操業はキメ細かくコンピュータで管理されています。

Iron is produced from iron ore, coal and limestone. These raw materials are all imported into Japan, with the exception of limestone. In the raw materials processing process, fine iron ore is mixed with fine coke and limestone and then heated to make fixed size sintered ore, while coal is carbonized into coke. This process has forged major improvements in the operational efficiency of blast furnaces.

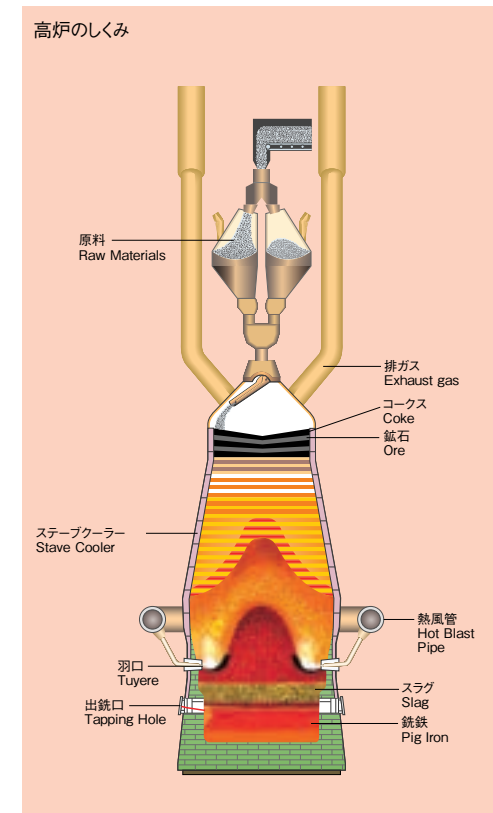
The East Nippon Works Kashima Area is equipped with massive blast furnaces. Iron ore and coke are alternately charged into these furnaces, with hot air of about 1,200 degrees C blown in to reduce the raw materials to molten iron (pig iron). A large number of sensors are attached to the furnace, with computers providing close control over the operation.



連続式アンローダーによる原料荷揚げ
Unloading Raw Materials by Continuous Unloader



原料ヤード Raw Material Yards



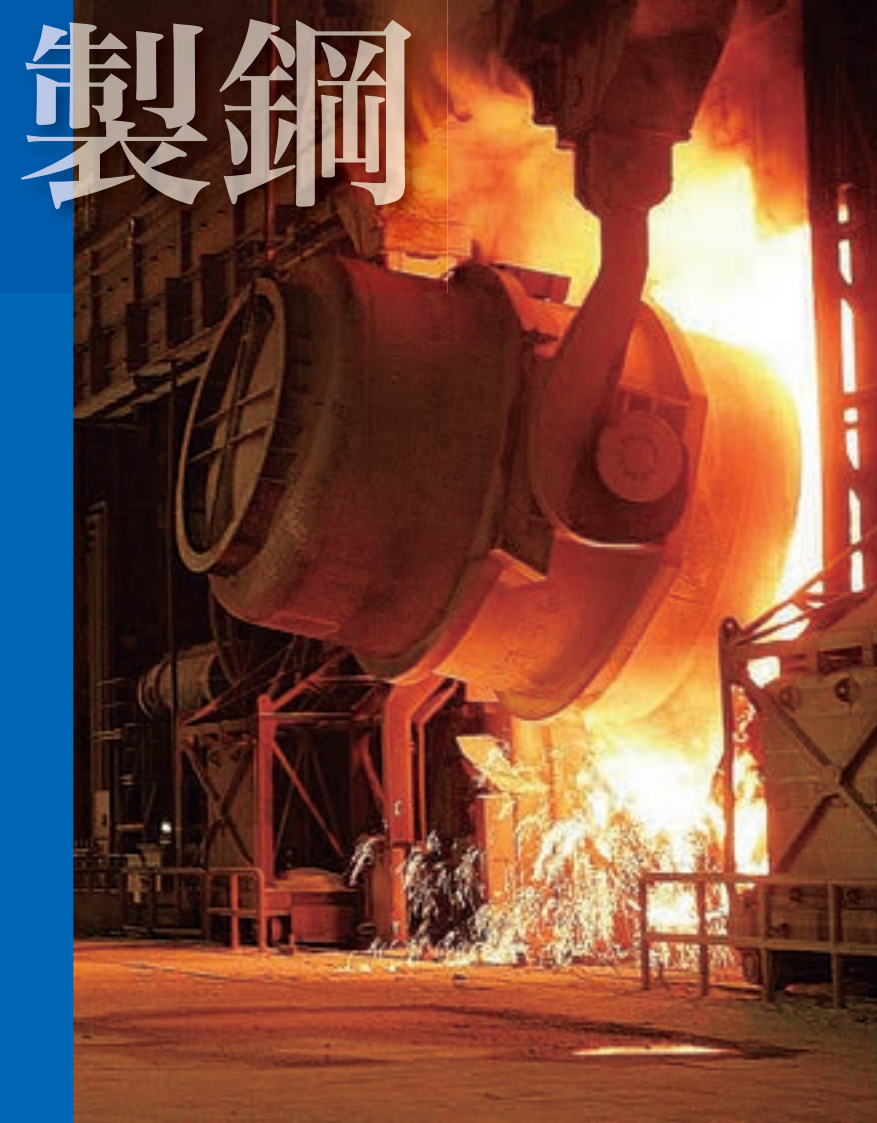
高炉の断面図 Schematic View of Blast Furnace



第一高炉 Kashima No.1 Blast Furnace



鉄の誕生 Stream of Molten Iron



連続鑄造機と熱間圧延設備の直結により、さらなる高生産性を実現

Direct-connected Process Between Casters And Hot Strip Mill Leads To Higher Productivity

高炉で作られる銑鉄は、炭素をはじめとする不純物が含まれるため、固くもろい性質があります。これらの不純物を除去して、強い鋼にする工程が製鋼工程です。

製鋼工場では、転炉で銑鉄中のリンを除去するSRP※1処理やMURC処理※2、鋼の純度を高めるIR※3、水素をはじめとするガス成分を除去するRH※4などの工程を、適切に組み合わせて、お客様の要望に応じた高品質の鋼を製造します。

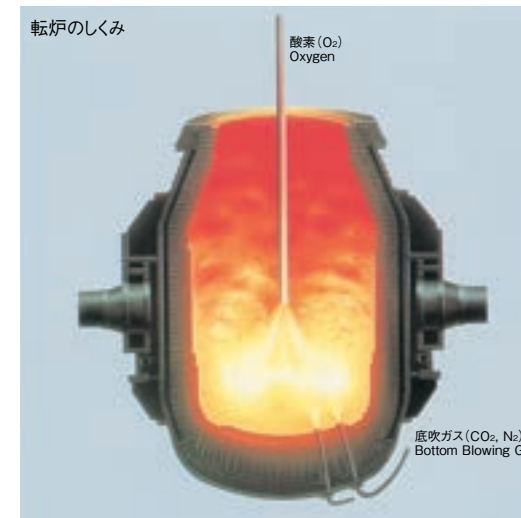
連続鑄造設備は、鋼を連続的に鑄造しスラブを生産するため、従来の造塊・分塊プロセスに比べ、非常に高能率な設備です。東日本製鉄所 鹿島地区は2機の連続鑄造設備を有しておりますが、特に第3連続鑄造機は次工程の熱延工場と直結しており、省エネ・省力化・効率化が得られる生産性の高い設備となっています。

※1 Simple Refining Process ※3 Injection Refining
※2 Multi-Refining Converter ※4 Vacuum Degasser

Pig iron produced from blast furnace has the property of hard and brittle due to its impurities including carbon. To produce strong steel, these impurity elements are removed at steelmaking shop.

To meet the requirements of each customer, several specialized refining processes are strategically combined to produce high-quality steel. Simple Refining Process (SRP) or Multi-Refining Converter (MURC) process is utilized at the converter stage for removing phosphorous from the molten iron. Injection Refining (IR) process enables to produce high purity steel, and vacuum degasser (RH) removes hydrogen from molten steel.

Continuous casting machine has a quite high productive capacity of slabs relative to the traditional process as typified by ingot casting and blooming. East Nippon Works Kashima Area has two continuous casting machines. Especially the No.3 Continuous Caster represents major advances in energy saving, labor-saving and efficiency through the influence of direct-connection to the hot strip mill.



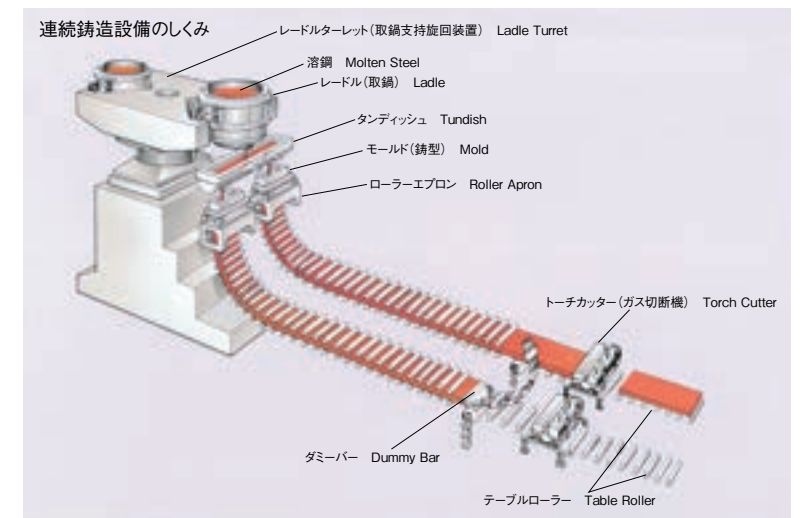
転炉の炉内模式図 Schematic View of Converter



転炉 Converter



RH炉 Vacuum Degasser



連続鑄造設備の構造 Schematic View of Continuous Casting Machine



第3連続鑄造設備 No.3 Continuous Casting Machine



薄板

表面処理

最新・最強の熱間、冷間圧延設備で、多品種、高付加価値製品を生産

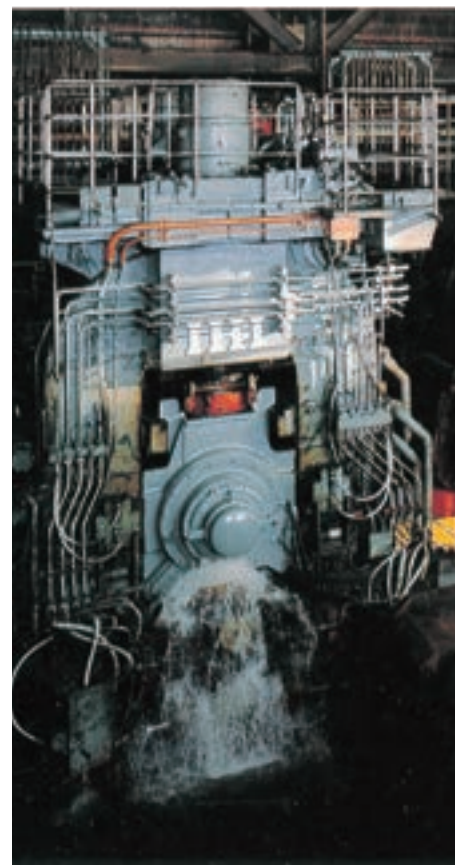
Diversified, High Value-added Steel, From The Newest And Most Powerful Hot-rolling And Cold-rolling Mills

熱間薄板圧延設備では、圧延前にスラブ幅を自在に変えることができるサイジングプレスにより、同じサイズのスラブから、製品寸法を様々な仕上げるため、クイックデリバリーが可能となっています。計測・制御面では、熱間圧延機のスタンド間厚み計により、圧延途中で鋼板の厚みを計測し、すぐ次の圧延設備でコントロールできます。また、熱間圧延プロセスの総合的な温度制御を高精度で行なう新加工熱処理システムなど、当社独自の技術により、機械特性・寸法精度とも、きわめて高品質な鋼板に仕上げます。

冷延鋼板に対する需要家の要求は、高鮮映性、ハイテン化（高張力鋼化）、超深絞りです。これに応えるため、東日本製鉄所 鹿島地区は、全連続ラインによる一貫生産体制を確立。特に最新鋭の冷延めっき工場では、酸洗から圧延、焼鈍、表面処理、検査、梱包、出荷までの全工程を統合し、物流と情報をスピーディに一元化させました。

One of the vital features in the hot strip mill at Kashima is the Sizing Press which facilitates easy changes in slab width prior to rolling. The ability to generate a wide range of product dimensions from same-size slabs holds the key to quick delivery. In respect to measurement and control, an inter-stand thickness gauge is installed in the finishing mill. This system measures the bar thickness at the middle of the finishing mill train, enabling correction of the roll gap of the following mill stands to obtain accurate product thickness. Furthermore, various technologies of Nippon Steel, such as High Integrated Controlling system of Uniform Properties that controls material temperature accurately during the hot rolling process, provide top quality products, both in terms of dimensional accuracy and mechanical properties.

Customer demands for cold rolled steel sheet include high image clarity, high tensile strength, and extra-deep drawing. To meet these needs, an integrated production system featuring a fully continuous line has been established at Kashima. The newly developed Cold rolling & Galvanizing mill plant effectively combines the pickling, rolling, annealing, surface coating, inspection, packaging and shipment processes to produce a new dimension of speed and congruence to the flow of logistics and information.



熱延仕上げ圧延機 Hot Strip Mill



No.2 冷間圧延機 No.2 Cold Strip Mill



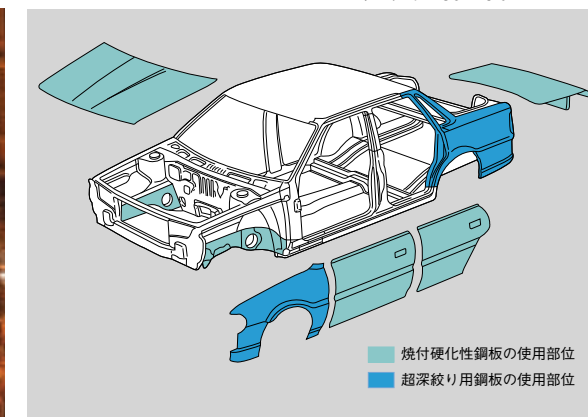
No.2冷間圧延機の構造
(ペアクロスミル、1～3スタンド)
Schematic View of No.2 Cold Strip Mill (Pair Cross Mill 1～3stand)



コイルヤード Coil Yard



連続焼鈍ライン
Continuous Annealing Line



自動車における新機能材の使用例
Application of Bake-Hardening and Extra-Deep Drawing Quality Sheets for Automobile

環境対応型表面処理鋼板をはじめ、時代に応える表面処理技術

Environmentally Friendly Coated Steel Sheet And Other Surface Treatment Technologies That Meet The Needs Of Our Times

表面処理鋼板は、溶融亜鉛めっきと合金化溶融亜鉛めっき鋼板があり、完全自動化した連続ラインで生産されています。東日本製鉄所 鹿島地区の表面処理鋼板は、自動車メーカーや家電メーカーの厳しい要求によって表面処理技術が磨かれてきました。最近では亜鉛めっきの上にクロムフリー化成処理を施した環境対応型表面処理鋼板や合金化溶融亜鉛めっきが主流です。

厳しい品質要求に応えるため、高品質な製造体制を採用し、近年は、耐食性にすぐれ、プレス加工がしやすく、しかも塗装のノリが良いというマルチプルな性能が評価され、高級車などに欠かせない存在となっています。

At Kashima, coated steel sheet, both galvanized and alloy galvanized, is produced on fully automated lines. The coated steel sheet produced in this steel-works embodies the latest advanced surface treatment technology - an area in which Kashima has polished its skills to better meet the rigorous demands of automakers, consumer electronics manufacturers and other customers. Two of the recent mainstream products in this field are environmentally friendly coated steel sheet, created by performing chrome-free chemical treatment of galvanized steel, and galvanealed steel sheet.

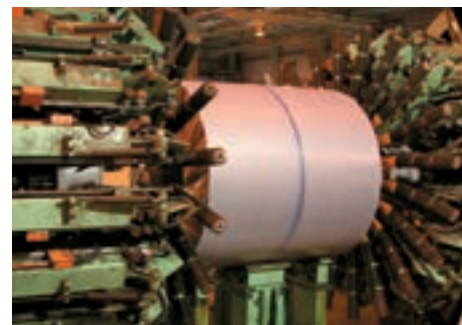
To meet strict customer requirement, Kashima products, made by its high-quality manufacturing processes, are highly valued, as exemplified by coated steel sheet. This steel product has multiple features including outstanding corrosion resistance, simple press machinability, and excellent adhesiveness of the coatings. These outstanding qualities have made this steel an indispensable component in luxury-grade cars and other leading products.



No.2溶融亜鉛めっき設備の運転室
Operations room of No.2 Continuous Galvanizing Line



溶融亜鉛めっき設備 Continuous Galvanizing Line



全自動コイル梱包 New Automatic Coil Packing Line



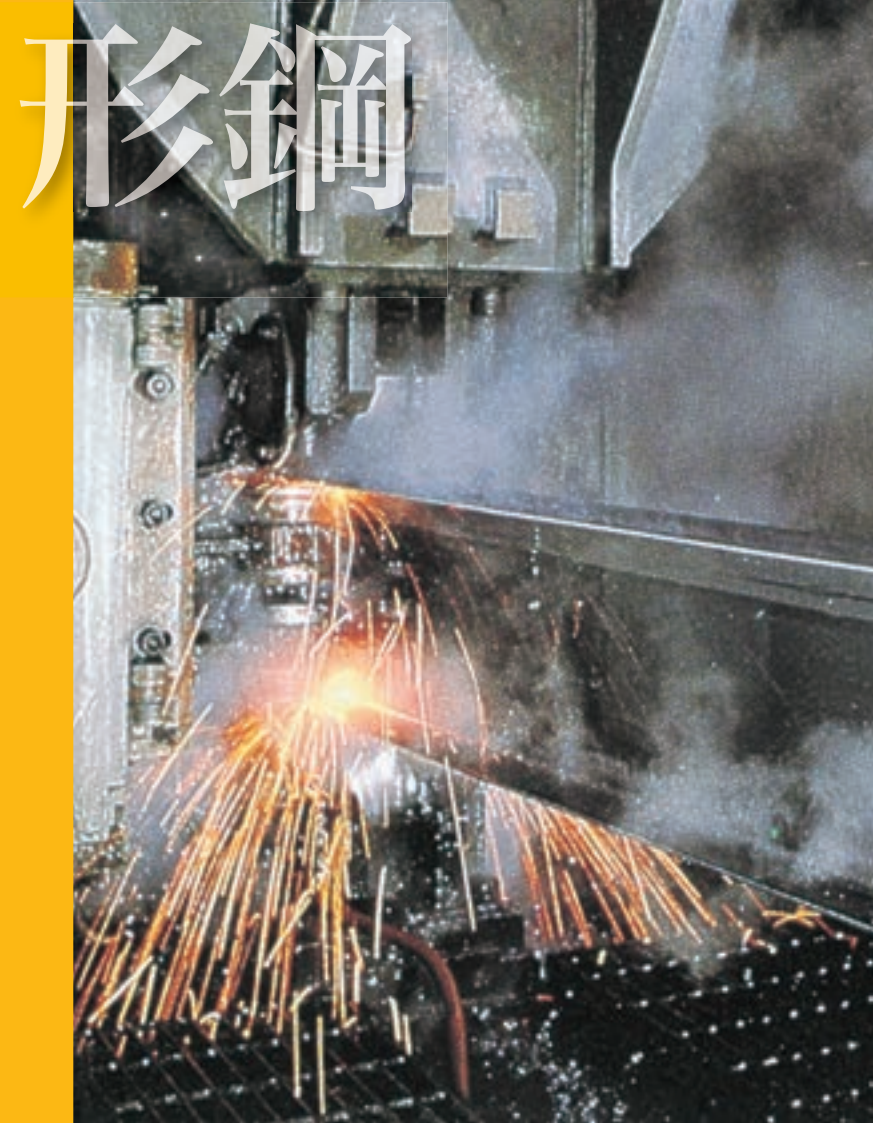
溶融亜鉛めっき設備 Continuous Galvanizing Line



分割ラインの検査室 Recoiling Line Inspection Room



無人試験装置 Full Automatic Tensile Strength Inspection Machine



社会基盤を支える建材製品 溶接軽量H形鋼を効率よく高品質で生産

Efficient and high-quality production of welded lightweight H-beams, essential construction materials that support social infrastructure.

東日本製鉄所 鹿島地区の溶接軽量H形鋼(スマートビーム)は、熱延鋼帯及び溶融亜鉛めっき鋼帯から高周波抵抗溶接によって連続的に製造される建材製品です。熱間圧延H形鋼と比べ板厚が薄いため軽く、断面の寸法精度が高いという特長があります。

標準サイズ以外にも非対称断面、プレめっき品など豊富な品揃えと高い品質で工業化住宅を始め、仮設住宅、建築鉄骨、システム建築、温室等の様々な分野のニーズに応え国内シェア80%を占めるに至りました。これからも商品開発と製造技術に磨きをかけ社会基盤を支えていきます。

The lightweight welded H-shaped steel (Smart Beam) produced at East Nippon Works Kashima Area is a construction material continuously manufactured from hot-rolled steel strips and hot-dip galvanized steel strips through high-frequency resistance welding.

Compared to hot-rolled H-shaped steel, Smart Beam is lighter due to its thinner web and flange plates and is characterized by its high dimensional accuracy. In addition to standard sizes, a wide variety of products are available, including asymmetrical sections and pre-galvanized items.

Thanks to this extensive product lineup and high quality, Smart Beam meets the needs of various fields such as industrialized housing, temporary housing, building steel frames, system buildings, and greenhouses, and has captured an 80% market share in Japan.

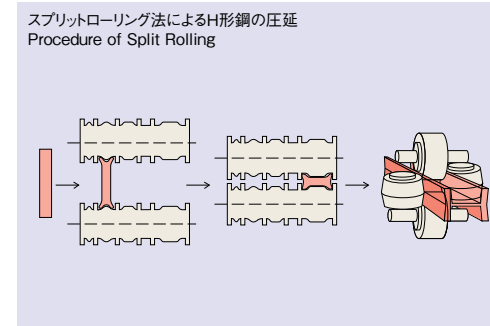
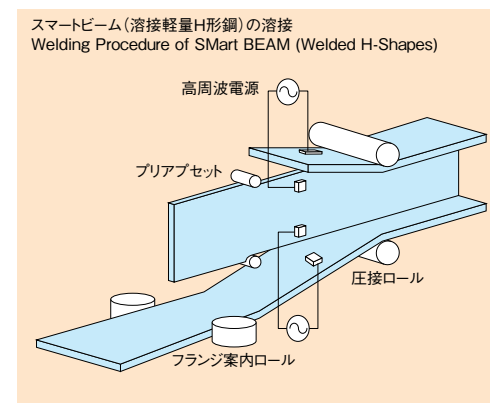
We will continue to refine our product development and manufacturing technologies to support the social infrastructure.



スマートビーム(溶接軽量H形鋼)の溶接
Welding Procedure of Smart BEAM
(Welded H-Shapes)



H形鋼 Rolling of H-Shape Beam



スマートビーム(溶接軽量H形鋼)の使用例(3階建住宅)
An example of using Smart BEAM (Welded H-Shapes):
(Three storied house)



H形鋼の使用例(湘南C-X内のショッピングセンター)
An example of using Rolled H Sections:
(Shopping Center in ShonanC-X)

オンリーワン製法で社会インフラを繋ぐ熱間溶接鋼管と幅広いニーズに応える電縫鋼管を製造

Only One Method for Production of Hot ERW Pipes that Connect the Infrastructure of Society

東日本製鉄所 鹿島地区では、研究開発・技術革新への取り組みにより、「第35回大河内記念生産賞」を受賞した「熱間電気抵抗溶接鋼管(SW鋼管)」と、造管から引抜まで一貫で製造し、炭素鋼からステンレス鋼まで幅広く対応する電縫鋼管を製造しています。

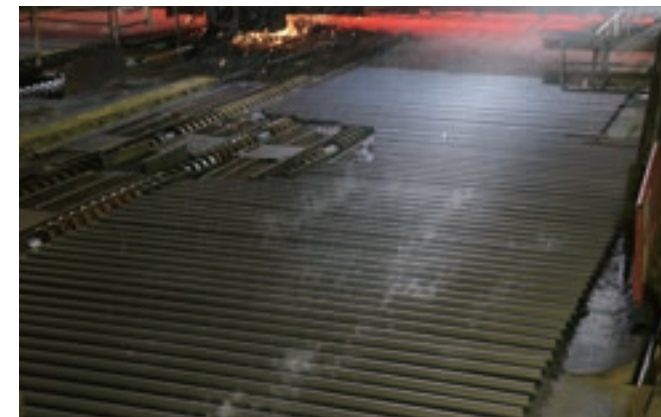
SW鋼管は、ガス管・水道管などの配管用鋼管や、熱間加工性を活用した土木・建築用異形鋼管を製造し、社会のインフラ整備に貢献しています。

電縫鋼管は、自動車・建設機械等で使用される高品質の鋼管製品を製造し、近年では自動車軽量化のための高強度薄肉化や中空化のニーズ、EV化による構造、部品変化のニーズに対応すべく製造実力向上、新商品開発に取り組んでいます。

At the East Nippon Works Kashima Area, efforts in research and technological innovation have led to the development of Hot Electric Resistance Welded Steel Pipe (SW Pipe), which won the 35th Ohkochi Memorial Production Prize. Alongside this, we manufacture a wide range of electric resistance welded (ERW) steel pipes, from carbon steel to stainless steel, using an integrated process from pipe forming to drawing.

SW Pipes are used in gas and water pipelines, as well as specially shaped pipes for civil engineering and construction, utilizing their excellent hot workability. These products contribute to the development of social infrastructure.

ERW Pipes are used in automobiles, construction machinery, and other applications. Recently, we have been working to enhance our manufacturing capabilities and develop new products to meet growing needs such as high-strength, thin-walled, and hollow pipes for automotive weight reduction, as well as structural and component changes driven by the shift to EVs.



熱間溶接鋼管(SW管) Hot ERW Pipe



鹿島電縫鋼管工場 Electric Resistance Welded Pipe Mill



連結送水管 Connecting Water Supplying Pipe



フレア加工ガス配管 Flared Gas Pipe Line



屋内給水配管 Water Supply Pipe Line



冷延鋼板と熱延鋼板の複合生産を高品質、高生産性で製造

High-Quality and High-Productivity Integrated Production of Cold-Rolled and Hot-Rolled Steel Sheets

ステンレス薄板工場では、高光沢製品に対応した20段ゼンジミア圧延機や高い生産性と形状制御能力を有した12段クラスター圧延機による冷間圧延加工、焼鈍酸洗設備と光輝焼鈍設備で様々な表面仕上げへの対応を実現しています。

更に、お客様のニーズに応じた表面の研磨加工、エンボス加工を施した冷延鋼板も製造しています。また、省資源化として、ニッケル系ステンレスの代替となる高純度フェライト系ステンレスを製造しています。

冷延鋼板に加え、プラント部材にも使用される熱延鋼板にも対応した複合生産体制を確保した製造を実現しています。

物流設備の自動化・効率化を果たし、近代化された現品確認システムと品質マネジメントシステムを駆使することで極めて厳格な品質管理も実現しています。

At the stainless steel sheet plant, cold rolling is carried out using a 20-high Sendzimir mill suitable for high-gloss products, and a 12-high cluster mill with high productivity and excellent shape control capability. Annealing and pickling lines, as well as bright annealing lines, enable a variety of surface finishes.

Furthermore, the plant also manufactures cold-rolled steel sheets with surface polishing and embossing treatments tailored to customer needs. As part of resource conservation efforts, we produce high-purity ferritic stainless steel as an alternative to nickel-based stainless steel.

In addition to cold-rolled steel sheets, the plant has established an integrated production system that also accommodates hot-rolled steel sheets used in plant components.

By automating and streamlining logistics systems and utilizing a modernized product tracking system and quality management system, we have achieved extremely rigorous quality control.



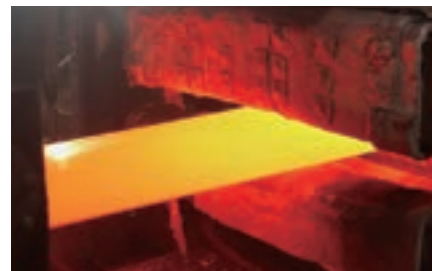
20段ゼンジミアミル 20-high Sendzimir mill



自動コイル倉庫 Coil Stock Yard



12段クラスターミル 12-High Cluster Rolling Mill



No2焼鈍酸洗ライン No.2 Annealing and Pickling Line



ステンレスの表面仕上げ Stainless Steel Surface Finish

発電事業

地域社会の共生、
社会貢献を目指す
環境対応型石炭火力発電所

Environmentally Responsible Coal-fired Power Plant Committed
To Harmonious Coexistence
With The Community And To Social Contribution



鹿島火力発電所全景 Panoramic view of Kashima Power Station

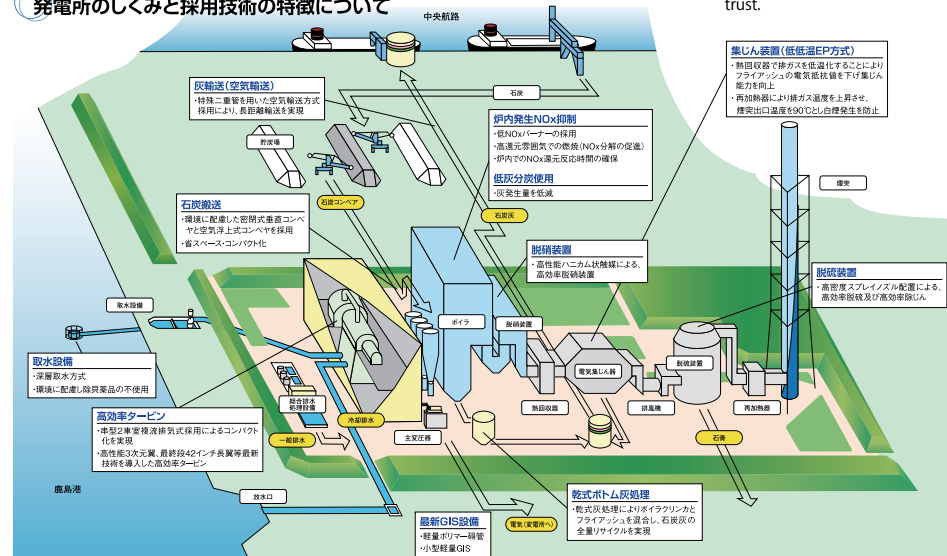
鹿島火力発電所は、2007年6月に営業運転を開始した1号機(定格出力52万2千kW)と2020年7月に営業運転を開始した2号機(定格出力64万5千kW)(事業主体: 鹿島パワー㈱ ※電源開発㈱と当社の共同出資会社)の石炭専焼火力発電プラントを有しており、発生した電気は全て電力会社に供給しています。

当発電所は東日本製鉄所 鹿島地区のインフラを最大限有効活用しています。発電所敷地は当地区海側の広大な遊休地を活用し、港湾は当地区施設を使用、発電燃料の石炭は製鉄工程にも使われていることから、安定供給ルートと石炭荷役設備、貯蔵設備を備えています。こうしたインフラ設備を有効利用することで、発電コストを抑えています。

環境設備には実績のある排煙処理設備として脱硝装置、電気集じん機、脱硫装置を備えています。また、使用後のタービン蒸気を水に変える復水器に用いる海水は深層取水し、熱交換後の海水との温度上昇を制限し排水口から低流速で表層放水することから、周辺環境への影響を可能な限り配慮しております。

当発電所は「地域社会との共生」「企業の務めである社会貢献」をテーマに地域の環境保全に万全を尽くすとともに、電力安定供給という発電所としての使命を着実に実行し、皆さまに信頼される発電所となるよう、努力を続けてまいります。

発電所のしくみと採用技術の特徴について



発電所のしくみと採用技術の特徴について The setup of the power plant and the features of the technology used

The Kashima Thermal Power Plant have two coal-fired thermal power units. It consists of the No. 1 unit (rated output 522,000 kW) which started operating in June 2007, and the No. 2 unit (rated output 645,000 kW) which started operating in July 2020 (business operator: Kashima Power Co., Ltd., a joint venture company of Electric Power Development Co., Ltd. and Nippon Steel). All generated power is supplied to an electric power company.

The power station makes maximal effective use of infrastructure at the East Nippon Works Kashima Area. The site for the power station makes use of a large tract of idle land on the seaward side of the steel works. The harbor uses the steel works' facilities and the coal used as fuel for power generation is also used in the steelmaking process. Accordingly, the site has a stable supply route and is equipped with coal loading and unloading equipment and storage facilities. The power generation cost is kept down by making effective use of this infrastructure.

In terms of environmental equipment, the power station is equipment with NOx removal equipment, an electric precipitator, and desulfurization equipment as proven flue-gas treatment systems. Additionally, consideration is paid as much as possible to effects on the surrounding environment by drawing seawater used in the condenser that turns used turbine steam into water from deep in the sea and then slowly discharging it from the drain outlet onto the surface of the sea while restricting temperature rise compared to the seawater after heat exchange.

The power station will make every effort to preserve the local environment based on the themes of "harmonious coexistence with the local community" and "social contribution - a corporate responsibility." It will also steadily fulfill its mission as a power station by providing a stable supply of electricity in an ongoing effort to be a power station that earns people's trust.



タービンブレード【最終段42インチ長翼】
Turbine blade (42 inches long at the last row)



灰輸送設備【二重管】(写真は模型)
Ash transport facility (double pipe)
[The photo is of a model]

鉄鋼関連産業をはじめ、エレクトロニクス、情報システムなど、多彩で個性豊かな日本製鉄グループ

Nippon Steel Group---a Network Of Leaders In Steel, Electronics, Information Systems And Other Crucial Fields

テクノロジーの複合体といわれる製鉄所が、スムーズで効率的に運営されるには、コンピュータ、エレクトロニクス、新素材、物流など、さまざまな分野の情報や技術が必要です。東日本製鉄所 鹿島地区は、日本製鉄の関連企業約20社からバックアップされ、その総合力によって成長を続けています。例えば、コンピュータ利用技術で産業界のトップクラスにある企業。コールドロール、水素ガス、副生品（主にスラグ）などを活用する企業。製鉄所にエネルギーを供給する企業。製品の物流を担当する企業。各種の新素材を開発する企業など、異業種関連会社がネットワークシステムによって結ばれ、情報交換しながら東日本製鉄所 鹿島地区とともに産業ゾーンを形成。グループによる総合力で、新しい鉄づくりをすすめています。



エア・ウォーター株式会社
AIR WATER INC.



日鉄ビジネスサービス株式会社
NIPPON STEEL BUSINESS SERVICE CO., LTD.



日鉄スラグ製品株式会社
NIPPON STEEL SLAG PRODUCTS CO., LTD.



鹿島共同火力株式会社
KASHIMA KYODO ELECTRIC POWER CO., LTD.

The steelworks, a facility known as a true nucleus of technology, requires the information and know-how of computers, electronics, new materials, logistics and other fields to ensure smooth and efficient operation. On this front, East Nippon Works Kashima Area is backed up by the 20 or so companies in Nippon Steel Group, with the integrated strength of this network providing a key factor in Kashima's ongoing growth and progress.

This family includes companies at the zenith of their fields in terms of computer use technology. Companies on the cutting edge of coal tar, hydrogen gas, byproducts (mainly slag) and other use know-how Companies set up to supply energy to steel works. Companies specializing in product distribution. Companies active in the development of exciting new materials.

In this way, experts from pivotal sectors are linked together into a vital network, with ongoing information exchanges helping forge a unique new industrial realm with Kashima at the hub. The energy and drive of this formidable corporate team is an essential force in Kashima's march toward a new generation of steelmaking.



日鉄テクノロジー株式会社
NIPPON STEEL TECHNOLOGY CO., LTD.



日鉄物流株式会社
NIPPON STEEL LOGISTICS CO., LTD.



日鉄テックスエンジニアリング株式会社
NIPPON STEEL TEXENG. CO., LTD.



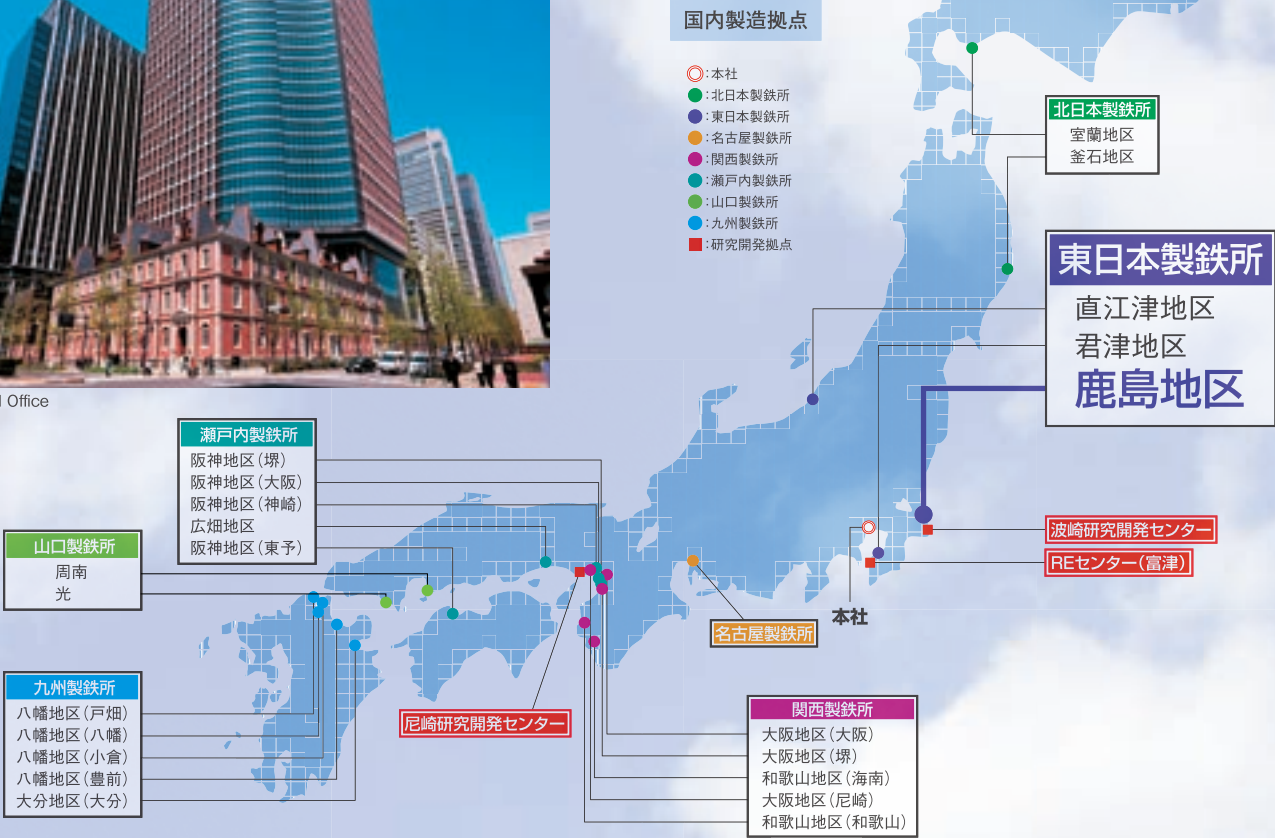
日鉄大径鋼管株式会社
NIPPON STEEL SPIRAL PIPE COMPANY, LTD.

全国に広がる日本製鉄の製造ネットワーク

Nippon Steel Manufacturing Network



本社 Head Office



アントラーズの活躍で、ホットな地域に変身した鹿島

The Exploits Of The “Antlers” Make Kashima Hot Spots

鹿嶋市は、東京から約80km。東は太平洋、西は北浦や霞ヶ浦、南には鹿島臨海工業地帯と、四季を彩る田園風物詩と近代的な工業が共存しています。

その鹿嶋のシンボルといえるのが鹿島神宮。市のほぼ中央にあり、約70万m2の神域は、スギ、ヒノキなどの針葉樹やシイ、サカキなどの常緑樹が繁っています。主祭神は、タケミカヅチのミコト。社殿が初めて造営されたのは、天智天皇の代(670年頃)といわれています。ここには、毎年約300万人の参拝客が訪れます。

いまや、鹿島神宮より人気があるのは、Jリーグ「鹿島アントラーズ」。試合当日、ホームグラウンドである「県立カシマサッカースタジアム」は、大勢のサポーターであふれます。楽しい街づくりをめざし、住友金属工業株式会社 鹿島製鉄所(現 日本製鉄株式会社 東日本製鉄所 鹿島地区)のサッカーチームが母体となって誕生した「鹿島アントラーズ」は、鹿島地域のシンボルのひとつとなっています。



御船祭 Mifune (sacred boat) Festival



鹿島神宮 Kashima Shrine



鹿島アントラーズ Kashima Antlers

©KASHIMA ANTLEERS

Kashima City, the home of East Nippon Works Kashima Area, is located about 80 kilometers from Tokyo. The community is bordered on the east by the Pacific Ocean, on the west the Kitaura and Kasumigaura fresh water bays, while to the south lies the Kashima Coastal Industrial Complex. The district is a unique mix of a tranquil, pastoral setting, and streamlined industrial facilities.

Kashima Shrine, famous in Japan since days of old, is a traditional symbol of Kashima. Located near the heart of the city, the shrine's 700,000m2 grounds are towered over by cedars, cypresses, oaks and other magnificent trees. The principle god enshrined here is Takemikazuchi-no-Mikoto, an ancient deity of Japan. The main shrine is said to have been completed around the year 670, with about three million visitors paying homage to the grounds yearly.

Gaining even greater attention than Kashima Shrine of late has been the “Kashima Antlers” a member of Japan's newly launched professional soccer “J-League.” On match days the team's home ground, “Kashima Prefectural Soccer Stadium” overflows with throngs of enthusiastic, loyal fans. The origin of the Antlers organization was the Sumitomo Metal industries, Ltd., Kashima Steel Works (Current the Nippon Steel Corporation East Nippon Works Kashima Area) soccer club, a local team formed to contribute to a healthy and progressive community. Much to the joy of the residents of Kashima, the Antlers emerged becoming a source of great pride for people in the Kashima area.

環境方針

Environmental Policy



基本理念

当所は、環境にやさしく持続して発展する環境保全型社会の構築に向け、地域社会と地球規模の環境保全の視点を踏まえた事業活動を推進する。

基本方針

1. 「環境経営」を基軸とした製鉄所運営の遂行に当たり、定量的な物差しを持ち、目標達成に向けたPDCA活動を進める「自律性を持った環境マネジメントシステム」を浸透させ、関連協力会社とともに環境負荷の継続的な低減を図る。
2. 法令やルール of 遵守を徹底するとともに、環境事故・防災事故の予防および拡大防止に取り組み、地域社会、お客さまとの開かれたコミュニケーションを通じて信頼に応える。
3. “3つのエコ”活動並びに革新的技術開発によって気候変動対策を推進する。
 - (1) 事業活動の全段階における環境負荷の低減(エコプロセス)
省エネルギー・省資源とともに、所内発生物や他産業の副産物再資源化に取り組むことによって、生産工程のCO₂削減をめざす。
 - (2) 環境配慮型製品の提供(エコプロダクツ)
社会全体での炭酸ガス削減や環境負荷軽減に資するエコプロダクツの開発および利用加工技術の提供に努める。
 - (3) 地球全体を視野に入れた環境保全への解決提案(エコソリューション)
郷土の森、海の森づくりに取り組むとともに、エコソリューション活動支援を通じて、持続して発展する社会の構築へ貢献する。

Basic principles

This Works shall carry out its business activities based on a perspective of environmental preservation on the local society and global scales, aiming to construct an environmentally sustainable society that can continually develop while remaining friendly to the environment.

Basic policies

1. When operating this Works based on principles of environmental management, we shall maintain quantitative indexes and shall expand the “autonomous environmental management system” which can carry out PDCA activities aimed at achieving targets for all parts of the organization, and shall continually work to reduce environmental impacts together with affiliated and cooperating companies.
2. We shall fully observe all laws, regulations, and rules, and shall work to prevent and mitigate environmental accidents and accidents caused by equipment failures, and shall prove ourselves worthy of trust through open communication with the local community and customers.
3. We shall carry out measures to combat climate change through the “three ecos” activities and the development of revolutionary technologies.
 - (1) Reduce environmental impacts at all stages of our business activities (eco process).
Aim to reduce CO₂ emissions in our production processes by conserving energy and resources, and by recycling by-products from our own Works and from other industries.
 - (2) Provide eco-friendly products (eco products).
Strive for the development of eco products and provision of new technologies for using and processing them that can contribute to reducing CO₂ gas emissions and environmental impacts for all of society.
 - (3) Propose solutions for environmental preservation that incorporate a global perspective (eco solution).
Work for the creation of hometown forests and marine forests, and provide support for eco solution activities, in order to contribute to the construction of a sustainable society.

地域貢献活動への取り組み～地域と共に～

Together with Local Communities: Programs that Contribute to Local Communities



工場見学 Plant tours



硬式野球部 Baseball team



日本製鉄杯卓球大会 Nippon Steel Cup table tennis championship



野球教室 Baseball class



日本製鉄杯野球大会 Nippon Steel Cup baseball championship



福祉貢献 Welfare contributions



日本製鉄杯バレー大会 Nippon Steel Cup volleyball championship



地域行事への参画 Participation in local events



理科教室 Science workshop



海岸清掃 Coastal cleaning



敷地周辺清掃 Clean-up activities