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**Glossary of terms used in iron and
steel (Products and quality)**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Iron and Steel Federation (JISF) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS G 0203**:2000 is replaced with this Standard.

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Glossary of terms used in iron and steel (Products and quality)

Introduction

This Japanese Industrial Standard was established in 1984 to define terms of iron and steel products broadly. Later, the major revision was made in 2000 to limit to terms of mainly steel products classified by use and their quality. This Standard specifies only those terms not corresponding to **ISO** because **JIS G 0204** was established to be in accordance with **ISO 6929**:1987 which defines the terms of steel products classified by shape and manufacturing method.

However, it has been required that related terms are widely defined and conform to the actual situation in Japan. Therefore, in this revision this Standard has been thoroughly reviewed and defines the terms including those of steel products classified by shape and manufacturing method.

1 Scope

This Standard specifies the principal terms and their definitions related to the products and their qualities for each use of the rolled, cast or forged steels.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitutes provisions of this Standard. The most recent edition of the standard (including amendment) indicated below shall be applied.

JIS R 6010 *Coated abrasive grain sizes*

3 Classification

The classification of terms related to iron and steel (products and quality) are as follow.

- a) Grade of steel, liquid steel, crude steel and semi-finished products
 - 1) Grade of steel
 - 2) Liquid steel, crude steel and semi-finished products
- b) Steel products (classified by shape and manufacturing method)
 - 1) Steel products
 - 2) Steel sheet and steel strip
 - 3) Surface treated steel sheet and strip
 - 4) Steel tube
 - 5) Section and steel piling
 - 6) Steel bars and wire rod
 - 7) Steel casting and forging

- c) Steel products (classified by use)
 - 1) For general processing
 - 2) For structure and for pressure vessel
 - 3) For civil engineering and construction
 - 4) For railway
 - 5) Steel tube (for piping, heat exchanger, structural purpose and special purpose)
 - 6) Wire rod and wire rod secondary product
 - 7) Carbon steel and alloy steel for machine structural use
 - 8) Special purpose steel (stainless steel, heat resisting steel, tool steel and clad steel)
 - 9) Materials for electricity
- d) Materials and other quality
 - 1) Chemical composition and quality of material
 - 2) Surface treatment and surface finish
 - 3) Shapes and dimensions
 - 4) Other

4 Numbers, terms and definitions

NOTE : Equivalent English in the most right column is informative. Moreover, the word of “steel” may be omitted in equivalent English of the steel products.

4.1 Grade of steel, liquid steel, crude steel and semi-finished products

4.1.1 Grade of steel

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1101	純鉄	ZYUN TETU	iron containing very little amount of carbon and other impurity elements Although there is no clear division of the limit of impurity elements, the iron with carbon content rate of up to about 0.02 % is called pure iron. NOTE: Electrolytic iron, Armco iron, carbonyl iron and reduced iron are treated as pure iron.	pure iron
1102	電解鉄	DENKAI TETU	pure iron obtained by electrolysis of iron salt aqueous solution Generally, the contents of impurity elements are 0.005 % max. in carbon, 0.005 % max. in silicon, 0.005 % max. in manganese, 0.004 % max. in phosphorus and 0.005 % max. in sulfur.	electrolytic iron
1103	鋼	KÔ	material whose main component is iron and generally about 2 % or under of carbon and other compositions are contained	steel
1104	炭素鋼	TANSO KÔ	steel made of alloy of iron and carbon, of which carbon content is generally within a range from 0.02 % to about 2 % Further, a small amount of silicon, manganese, phosphorus, sulfur, etc. are usually contained. For convenience, carbon steel may be sometimes classified as follows according to the carbon content or hardness (including strength). Classification by carbon content: Low carbon steels, medium carbon steels and high carbon steels Classification by hardness: Extra mild steel, mild steel and hard steel	carbon steel

No.	Term (Japanese character)	Reading	Definition						English equivalent (informative)
1105	合金鋼	GÔKINKÔ	steel to which one or more alloy elements are added in order to improve the properties of steel or to give designated properties Although the standards for the contents of alloy elements are a little different from those of ISO 4948-1 , according to the classification by Customs Co-operation Council, the steels of which chemical composition is contained at least the following contents. Unit: %						alloy steel
			Alloy element	Content	Alloy element	Content	Alloy element	Content	
			Al	0.3	Mn	1.65	W	0.3	
			B	0.000 8	Mo	0.08	V	0.1	
			Cr	0.3	Ni	0.3	Zr	0.05	
			Co	0.3	Nb	0.06	Others (excluding S, P, C, N)	0.1	
			Cu	0.4	Si	0.6			
			Pb	0.4	Ti	0.05			
			For convenience, these steels are sometimes called a high alloy steel or a low alloy steel according to the contents of alloy element.						
			1106	超合金	TYÔGÔKIN	alloy of which content rate of iron is about 50 % max. by the addition of a great amount of alloy elements, in order to improve the corrosion resistance or thermal resistance of steel And there are nickel-chrome iron alloy, etc. (see JIS G 4903 and JIS G 4904).			
1107	リムド鋼	RIMUDO KÔ	a classification of steel by ingot casting process and steel of which liquid steel is solidified while a specific stirring motion like as boiling (it is called rimming action) is being carried out by carbon monoxide generated by reaction between oxygen and carbon in liquid steel within a mould Steel manufactured by addition of ferromanganese, a small amount of aluminium and so on as deoxidizers. Although the surface layer is clear, there is segregation in other parts.						rimmed steel

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1108	キャップド鋼	KYAPPUDO KÔ	a classification of steel by ingot casting process and steel of which inside is gently solidified by adding deoxidizer immediately after putting the undeoxidized liquid steel into an ingot mould, or by covering it with a cap, in order to force the rimming action to complete sooner The former is called chemical capped steel and the latter mechanical capped steel. Capped steel is the steel of which surface layer is made clean like rimmed steel, and the inside has little segregation like semi-killed steel, and further shrinkage cavities are compensated by air bubbles.	capped steel
1109	セミキルド鋼	SEMI KIRUDO KÔ	a classification of steel by ingot casting process and steel of which is deoxidized intermediately between the rimmed steel and killed steel by adding a suitable quantity of ferromanganese, ferrosilicon, aluminium and so on as deoxidizers Steel in which the shrinkage cavity due to solidification is decreased by generating a little amount of bubble during the progress of solidification.	semi-killed steel
1110	キルド鋼	KIRUDO KÔ	steel sufficiently deoxidized with ferrosilicon, aluminium and so on In the case of ingot casting, during the progress of solidification in a ingot mould, it is gently solidified without generation of carbon monoxide, being comparatively uniform, with little segregation and has no blow hole. However, because of a shrinkage cavity is formed in the centre of upper part, its yield is low. In the case of continuous casting, it is killed steel and, comparing with an ingot casting, uniformity and yield are better. Killed steel is further classified according to grain size or deoxidizer and as follows. a) Classification by grain size Coarse grained killed steel: It refers to the killed steel of which grain size number of austenite phase is less than 5. Fine grained killed steel: It refers to the killed steel of which grain size number of austenite phase is not less than 5.	killed steel

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
			b) Classification by deoxidizers Silicon killed steel Aluminium killed steel Silicon aluminium killed steel NOTE: For the rimmed substitute steel by continuous casting, see “rimmed substitute steel”.	
1111	リムド相当鋼	RIMUDO SÔTÔ KÔ	steel manufactured as a substitute steel of rimmed steel, by continuous casting with mild deoxidization Mainly used for low carbon steel wire rod.	rimmed substitute steel
1112	鑄鉄	TYÛTETSU	material, whose main components are iron and carbon, generally over about 2 % of carbon and other components are contained	cast iron

NOTE: Deoxidation: The process of removing oxygen in liquid steel by adding elements such as silicon, manganese and aluminium. Steel is classified into killed steel, semi-killed steel, capped steel and rimmed steel according to the degree of deoxidation.

4.1.2 Liquid steel, crude steel and semi-finished products

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1201	溶鋼	YÔKÔ	steel in the liquid state ready for pouring There are liquid steel mainly to be poured into ingot mould, to be continuously cast and to be used for steel casting.	liquid steel
1202	粗鋼	SOKÔ	generic name of steel ingot (including continuous cast steel slab or cast metal) and cast steel Used for a statistic terminology. In a production statistics, crude steel is defined as follows. Steel ingot for rolling (by ingot mould and continuous cast) + steel ingot for forging + steel casting. NOTE: In the specification of ISO 6929 , it is defined as products of either type of liquid steel or steel ingot.	crude steel

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1203	鋼塊	KÔKAI	products obtained by pouring liquid steel into ingot mould or semi-finished products produced by continuous casting Generally formed into semi-products or products after the subsequent hot-forming process or forging process. NOTE: Includes steel ingot remelt by vacuum arc or electrogas slag process and cast.	ingots
1204	鋼片	KÔHEN	semi-finished products whose cross-sectional shapes along the length are constant, obtained by rolling or forging of steel ingots or by continuous casting Generally intended for conversion into finished products by the subsequent hot rolling or hot forging. According to the cross-sectional shape and dimension, classified into slab, bloom, billet, sheet bar and so on.	semi-finished products
1205	スラブ	SURABU	plate shaped semi-finished products of thickness equal or greater than 50 mm and a ratio of width to thickness is equal or greater than 2 Used as a rolling material for steel plate and steel strip. NOTE: In the specification of ISO 6929 , slabs with a ratio of width to thickness greater than 4 are called “flat slabs”.	slabs
1206	ブルーム	BURÛMU	semi-finished products having certain size of square cross-section (square and rectangular of the long side twice or less the shorter side) or round cross-section There are square blooms, rectangular blooms and round blooms, and generally semi-finished products of one side or diameter of over 200 mm. NOTE: In the specification of ISO 6929 , square blooms with side greater than 120 mm and rectangular blooms having a cross-sectional area greater than 14 400 mm ² , with a ratio of width to thickness greater than 1 and less than 2.	blooms

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1207	ビレット	BIRETTO	semi-finished products having certain size of square cross-section (square and rectangular of the long side twice or less the shorter side) or round cross-section There are square billets, rectangular billets and round billets, and generally semi-finished products of one side or diameter of equal to or greater than 50 mm and less than or equal to 200 mm. NOTE: In the specification of ISO 6929, square billets with side generally equal to or greater than 50 mm and less than or equal to 200 mm and rectangular billets having a cross-sectional area equal to or greater than 2 500 mm² and less than or equal to 14 400 mm², with a ratio of width to thickness greater than 1 and less than 2.	billets
1208	シートバー	SÎTOBÂ	semi-finished products in strip shape of rectangular cross-section with generally thickness equal to or less than 50 mm and width about 250 mm NOTE 1 To be used as material of steel plate made by pull-over rolling mill. NOTE 2 In the specification of ISO 6929, flat shape semi-finished products of width equal to or greater than 150 mm and thickness greater than 6 mm and less than 50 mm.	sheet bars
1209	形鋼用ブランク	KATAKÔYÔ BURANKU	semi-finished products to be especially intended for the manufacture of large sections, sheet pile and so on Those which have been preformed for that purpose. The cross-sectional area is generally greater than 2 500 mm². May be called shaped blooms or beam blanks.	blanks for sections
1210	鋳鋼鋳込み	TYÛKÔ IKOMI	as solidified shape after liquid steel poured into mould Other than the final product, pouring gate, feeder head, weir and so on are attached.	steel castings as poured

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1211	鑄鋼鑄放し	TYŪKŌ IBANASI	those obtained by removing the useless parts such as pouring gate, feeder head and so on from steel castings and not yet machined Steel castings unmachined may be shipped as it is, be as personal use, and sometimes to be machined.	steel castings unmachined
1212	鍛鋼打放し	TANKŌ UTIHANASI	those forged to a specified shape from ingots or semi-finished products and not yet machined	steel forgings unmachined

4.2 Steel products (classification by shape and by manufacturing method)

4.2.1 Steel products

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2001	鋼材	KŌZAI	a generic term of steels processed to a required shape by various kinds of methods such as rolling, forging, drawing or casting Steel ingots and semi-finished products are not included.	steel products
2002	圧延鋼材	ATUEN KŌZAI	steel products to be formed to bars, wire rods, sections, steel pates, steel strip in coil, flat bar and so on by rolling mill Normally those further not hot rolled by the manufacturer.	rolled steel products
2003	再生鋼材	SAISEI KŌZAI	steel products manufactured by rerolling steel scraps for recycling and steel scraps generated during the manufacture of steel products	rerolled steels

4.2.2 Steel sheet and steel strip in coil

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2101	鋼板	KŌHAN	hot rolled or cold rolled flat steel products, cut to flat plate shape, including the cut length from steel strips However, flat bars are not included.	steel plates, steel sheets

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2102	厚鋼板	ATU KÔHAN	steel plates manufactured by hot rolling In the classification for statistical purpose, thickness is equal to or greater than 3.0 mm. Those of equal to or greater than 3.0 mm and less than 6.0 mm may be called medium gauge plate and those of equal to or greater than 6.0 mm in thickness may be called heavy steel plate. NOTE: In the specification of ISO 6929 , in the classification for statistical purpose, it is recommended to classify steel plates whose thickness is equal to or greater than 3 mm, and the cold rolled steel plate shall be included.	steel plates
2103	薄鋼板	USU KÔHAN	steel sheets manufactured by hot rolling or cold rolling with thickness of generally less than 3.0 mm May be called sheets.	steel sheets
2104	鋼帯	KÔTAI	hot rolled or cold rolled flat steel products which are coiled up	steel strip in coil, steel sheet in coil, steel plate in coil
2105	熱間圧延鋼板	NETUKAN ATUEN KÔHAN	hot rolled steel plate by rolling mill, including the cut length from hot rolled steel strip in coil and steel plate of thermo-mechanical control process NOTE: Thermo-mechanical control process may be called TMCP.	hot rolled steel sheet and strip in cut length
2106	熱間圧延鋼帯	NETUKAN ATUEN KÔTAI	hot rolled steel strip in coil by rolling mill, including the steel strips in coil of thermo-mechanical control process NOTE: Thermo-mechanical control process may be called TMCP.	hot rolled steel sheet and strip in coil
2107	冷間圧延鋼板	REIKAN ATUEN KÔHAN	steel plates rolled by cold rolling mill NOTE: ISO 6929 specifies at least 25 % of cross-sectional area shall be reduced by cold rolling.	cold rolled steel sheet and strip in cut length

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2108	冷間圧延鋼帯	REIKAN ATUEN KÔTAI	steel strips in coil rolled by cold rolling mill Steel strips of equal to or greater than 600 mm in width are called cold rolled wide steel sheet and strip in coil, and those of less than 600 mm in width as cold rolled narrow steel sheet and strip in coil (may be called cold rolled sheet hoop including sheared in cut length). NOTE: ISO 6929 specifies at least 25 % of cross-sectional area is reduced by cold rolling.	cold rolled steel sheet and strip in coil
2109	しま（縞）鋼板	SIMA KÔHAN	steel sheets with raised regular patterns on one side of the sheet to prevent slipping by notching the surface of rolling mill roll This steel sheet is also called floor boards.	checkered plates, floor steel plates
2110	みがき特殊帯鋼	MIGAKI TOKUSYU TAIKÔ	cold rolled hoop steel using carbon steel for machine structural use, alloy steel for machine structural use, tool steel, spring steel and so on Cold rolled hoop steel is generic designation of cold rolled steel strip of less than 600 mm in width and cut in length from them.	cold rolled special steel strip
2111	波板	NAMIITA	wave-shaped steel sheet of mainly hot-dip galvanizing steel plate or hot dip painting steel sheet	corrugated steel sheets

4.2.3 Surface treated steel sheet and strip

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2201	表面処理鋼板 及び鋼帯	HYÔMENSYORI KÔHAN OYOBI KÔTAI	steel sheet or steel strip of whose surface is covered by metallic or non-metallic materials According to coating method and coating material, it is classified into hot dipping, electroplating, painting and so on.	surface treated steel sheets and strip
2202	溶融めっき鋼板 及び鋼帯	YÔYÛ MEKKI KÔHAN OYOBI KÔTAI	steel sheet and strip which are dipped into molten metal and metallic coated	hot-dip coated steel sheets and strip

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2203	電気めっき鋼板 及び鋼帯	DENKI MEKKI KÔHAN OYOBİ KÔTAİ	steel sheet and strip which are metallic coated by method of electrodeposition by electrochemical process	electrolytic coated steel sheets and strip
2204	塗装鋼板及び鋼帯	TOSÔ KÔHAN OYOBİ KÔTAİ	steel sheet and strip which are finished by bonding organic coating metal	prepainted steel sheets and strip
2205	有機被覆鋼板 及び鋼帯	YÛKI HIHUKU KÔHAN OYOBİ KÔTAİ	steel sheet and strip which are painted with organic coating or to which plastic film is adhered	organic coated steel sheets and strip

4.2.4 Steel tube

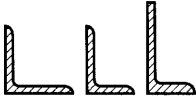
No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2301	鋼管	KÔKAN	steel products formed into tube shape There are seamless and welded or forged. NOTE: Customarily, “tube” is used basically in English and “pipe” is used only for transfer such as pipeline.	steel tubes
2302	継目無鋼管	TUGIMENASI KÔKAN	steel tubes without a seam, manufactured by hot-rolling, extrusion or punching from steel ingot or semi-finished product, or machining after piercing Cold drawn or cold rolled seamless steel tube is called cold finished seamless steel tube.	seamless steel tubes
2303	溶接鋼管	YÔSETU KÔKAN	steel tubes formed from steel plates, steel sheets or steel strips manufactured by hot rolling or cold rolling, steel tubes welded across the abutting edge As for welding, there are longitudinal direction and spiral.	welded steel tubes

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2304	電気抵抗溶接鋼管	DENKI TEIKÔ YÔSETU KÔKAN	steel tubes which are, after forming steel strips, steel plates or steel sheets to tubular shape, manufactured by welding the joint parts by electric resistance welded method and having one welding line parallel to the longitudinal direction Those hot reducing rolled of electric resistance welded are called hot finished electric resistance welded steel tubes, and those cold drawn or cold rolled are called cold finished electric resistance welded steel tubes.	electric resistance welded steel tubes
2305	サブマージアーク溶接鋼管	SABUMÂZI ÂKU YÔSETU KÔKAN	steel tubes which are, after forming steel strip, steel plates or steel sheets to tubular shape, manufactured by welding joint parts by submerged arc welding Steel tubes which has a welding line parallel to the longitudinal direction is called to as straight seam line welded steel tube, and which has a spiral welding line is called to as spiral seam welded steel tube.	submerged arc welded steel tubes
2306	自動アーク溶接鋼管	ZIDÔ ÂKU YÔSETU KÔKAN	steel tubes which are manufactured by automatic welding wire feeding and continuously welding proceeding apparatus For ordinary steels, submerged arc welded steel tubes are common, and for stainless steel, TIG welding, plasma arc welding or MIG welding are applied.	automatic arc welded steel tubes
2307	鍛接鋼管	TANSETU KÔKAN	steel tubes which are, after heating steel strip and forming to tubular shape, manufactured by cladding the joint part by hot cladding method, and having one straight seam line parallel to the longitudinal direction	butt-welded steel tubes

4.2.5 Section and sheet piling

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2401	条鋼	ZYÔKÔ	steel products formed to the shape of sections, sheet piling, flat bars, bars and so on Generally hot rolled by box type caliber rolling mill or universal rolling mill.	long products

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2402	形鋼	KATAKÔ	steel products formed to the cross-sectional shape of angles, grooves, I sections, H sections and so on NOTE: ISO 6929 specifies angles as L sections, and grooves as U sections.	sections
2403	熱間圧延形鋼	NETUKAN ATUEN KATAKÔ	cross-section hot rolled by rolling mill Sections thermo-mechanical controlled process are included. NOTE: Thermo-mechanical control process may be called TMCP.	hot rolled sections
2404	H形鋼	EITI KATAKÔ	cross-section whose shape resembles the letter H Generally, they are manufactured by universal rolling mill and two sides parallel have the same thickness and no sloping of inside surface. It is classified by the relationship of the height and the edge width into narrow width (beam), medium width (beam) and wide width (column).  NOTE: In ISO 6929 , the flanges with width greater than 0.66 times the nominal height of the section or 300 mm or over, and those with flanges wider than 0.8 times the nominal height may be called "columns".	H sections
2405	I形鋼	AI KATAKÔ	cross-section whose shape resembles the letter I  NOTE: In ISO 6929 , more detailed classification of I sections and H sections, flanges with width equal to or less than 0.66 times the nominal height of the section and less than 300 mm are called I sections.	I sections

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2406	T 形鋼	TÎ KATAKÔ	cross-section whose shape resembles the letter T  NOTE: T sections obtained by cutting the web of I sections or H sections are called CT sections.	T sections
2407	溝形鋼	MIZO KATAKÔ	cross-section whose shape resembles the letter U 	U sections
2408	山形鋼	YAMA KATAKÔ	cross-section whose shape resembles the letter L Whether the length and thickness of two sides are the same or not, it is called equal-leg angle, unequal-leg angle or unequal-legs and unequal thickness angle. 	angles
2409	球平形鋼	KYÛHIRA KATAKÔ	cross-section with bulge along the full length of a longitudinal edge of one of the surfaces  NOTE: In ISO 6929, generally the width is less than 430 mm.	bulb flats
2410	軽量形鋼	KEIRYÔ KATAKÔ	cross-section of U sections, Z sections, angles, lip channel sections and so on, cold formed from steel sheets or steel strip NOTE: In the case of H sections, continuously welded and formed from steel strip, and called weld light sections. Generally, simple sheet piling is not included in light gauge sections.	light gauge sections

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2411	鋼矢板	KÔYAITA	sections having water tight joints at the both edges, to construct the partition panel of water, soil and so on According to the section shape, there are U sections, Z sections, straight line sections, H sections, hat sections and so on. Other than the hot rolled sheet piling, there are steel pipe sheet piling, whose joints are attached to steel tube, simple sheet piling, which is cold formed from steel sheet, and so on. NOTE: In ISO 6929, other than these, there are fabricated sheet piling and box sheet piling are specified.	sheet piling
2412	坑梓鋼	KÔWAKU KÔ	sections whose shape resembles the letter I or Ω The thickness is heavy to resist the offset load of earth pressure to be used for gallery support. Generally it is used in bending to follow the arch of gallery section. NOTE: In ISO 6929, it is specified that “greater slope of the inside face of the flange (of about 30 %) and may have a width greater than 0.70 times of the nominal height” to distinguish from I sections.	sections for colliery arches

4.2.6 Bars and wire rod

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2501	棒鋼	BÔKÔ	steel products of hot rolled or forged to bar shape and cut to the specified length According to the cross-sectional shape, there are round bars (circular), square bars (square), flat bars (rectangle), hexagonal bars (hexagon), octagonal bars (octagon), deformed bars (special forms) and so on. Further, bar in coil, which is wound in coil, is included in the wire rod from the statistical view from its production process, but the original usage is bars.	bars

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2502	熱間圧延棒鋼	NETUKAN ATUEN BÔKÔ	steel bars hot rolled by rolling mill Includes the steel bars thermo-mechanical controlled process. Sometimes bar in coil is included.	hot rolled steel bars
2503	バーインコイル	BÂINKOIRU	steel bars which are, of rather small diameter (normally 5 mm or over and 50 mm or under), hot rolled and wound in coil form as long lengths The cross-sectional shapes include round, square, hexagon and so on. NOTE: Bar in coil is included in steel bars usage and the material and usage are different from wire rod, but it may be called wire rod because it is difficult to distinct from wire rod apparently. Because it is manufactured in the same rolling line as the wire rod, it is statistically treated as wire rod. Further, in the narrow sense, it may be classified only in the case of the ordinary steel and it is called wire rod in the case of the special steel.	bar in coil
2504	丸鋼	MARUKÔ	steel bars rolled or forged in bar shape, with circular cross-section and diameter of generally 8 mm or over	round bars
2505	角鋼	KAKUKÔ	steel bars rolled or forged in bar shape, with square cross-section and opposite side distance of generally at least 8 mm The corner of the cross-section may be rounded.	square bars
2506	平鋼	HIRAKÔ	plate type steel bars rolled in bar shape with rectangular cross-section, rolled surfaces of all four surfaces of the cross-section, the thickness (t) of generally 5 mm or over and the width of not more than 500 mm For spring steels, the opposite shorter edge of flat bars is circular (circular arc R is about $0.5 t$) is called round edge of flat bars. Hot rolled flat bar is especially called hot rolled flat bar and cold rolled one as cold rolled flat bar. NOTE: ISO 6929 specifies that the width shall not be over 150 mm.	flat bars
2507	異形平鋼	IKEI HIRAKÔ	flat bars whose corresponding short sides are not parallel Those with which both the corresponding short sides are arc are called round edged flat bars.	deformed steel flats, round edged steel flats