

WIRE ROD



WIRE ROD



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The POSCO Quality

Ultra-High Quality Products Which Touch the Customer's Soul

- **Customer Inside:** We create the best value for customers by keeping their needs foremost.
- **Basic Inside:** We focus on fundamentals and principles, eliminating deviation and waste.
- **Synergy Inside:** We seek to grow alongside our supplier chain through trust and communications.

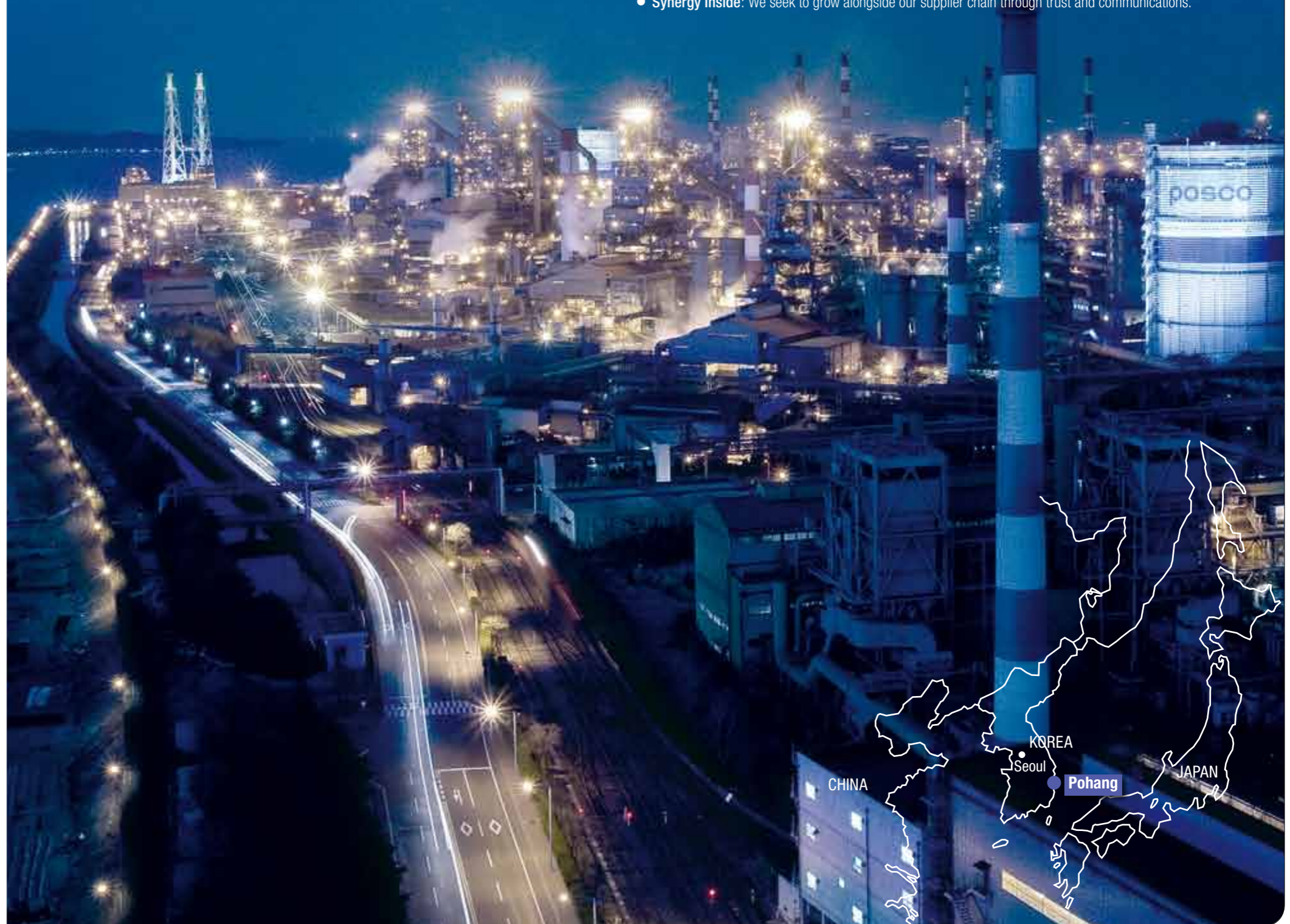


Upon completion of its first-phase manufacturing facility in 1973, Pohang Steelworks, Korea's first integrated steel mill, was finally completed after 4 stages of construction at Young-il Bay in February 1981.

POSCO is capable of producing and processing a variety of carbon steels and stainless steels. The company's global competitiveness was further enhanced when we opened the world's first FINEX commercialization facility in May 2007.

Main products hot-rolled steel, plate, cold-rolled steel, wire rod, electrical steel, stainless steel, API steel, etc.

Crude steel production 16.185 million tons (as of 2013)



Manufacturing Processes & Equipment

In order to deliver quality products POSCO is equipped with the latest fully-automated, computer-controlled, cutting-edge facilities and technologies. These tools guarantee products of the highest precision and quality for our customers.



Billet Conditioning

To improve the surface quality of wire rods, billets are descaled by shot blasting, and inspected for surface flaws by magnetic particle tester. Grinding machines are used to remove any surface flaws. In addition, continuous ultrasonic testing is conducted to guarantee the prime quality



Reheating

Reheating furnace is carefully examined, to produce prime materials in customers' desired properties. To prevent decarburization, billets are preheated at a low temperature, followed by a full heating process, to suit a right temperature for billets' rolling procedure. The rolling speed and fuel-to-air ratio in the reheating furnaces are fully controlled.



Rolling

The rolling procedure must be carefully controlled, to adjust temperature, pressure and deformation rate to form customers' desired characteristics. Moreover, surface roughness, sizes, and deviations are subject to adjustment to prevent any flaws.



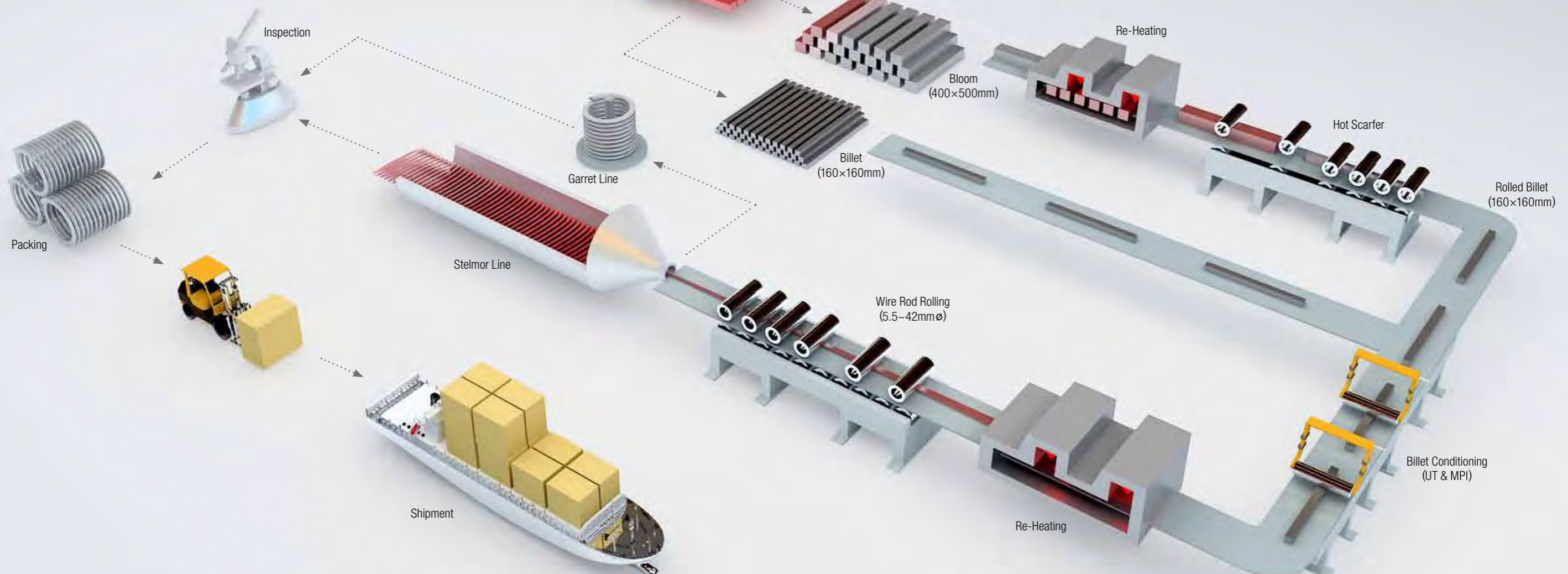
Cooling

Precise control of temperature, air volume, speed, opening and closing of slow-cooling sections are all variables that affect physical properties. Uniform fast-cooling methods are used for high carbon steel wires, and slow-cooling method is applied for alloy and low-carbon steel.



Inspection

Samples of leading and trailing edges of wire rods are collected for quality assurance tests, which include surface flaw detection. Once wire rods are deemed prime, products are then packaged and tagged to clients' requirements.



In order to produce high-quality products, our plants are equipped with state-of-the-art facilities and utilize the latest processing techniques.

POSCO's wire rod products, renowned for their quality, are used in a number of areas, ranging from very basic industrial materials to specialized manufacturing facilities equipment. Through the use of cutting-edge facilities and automated systems, POSCO maintains consistent efforts in the development and manufacture of higher quality wire rod products.

Division		#1 Wire Rod Mill	#2 Wire Rod Mill	#3 Wire Rod Mill	#4 Wire Rod Mill
Production Capacity (10 thousand tons)		70	55	88	80
Billets	Unit Weight (tons)	2	2	2	2
	Size(mm)	160×160×10,200	160×160×10,200	160×160×10,200	160×160×10,200
Wire Rod Size(mmΦ)		5.5~13.0	5.5~42.0	5.5~16.0	5.5~22.0
Rolling Mills' Strand	Strand	2	1	2	1
	Type	Horizontal	Horizontal, Vertical	Horizontal, HV	Horizontal, Vertical
	Pass	30	31	31	30
	Line Speed (m/sec)	75	95	110	110
Size(mm)	Capacity(T/H)	110	80	140	150
	Type	Walking Beam	Walking Beam	Walking Beam	Walking Beam
Cooling Equipments		Stelmor	Stelmor, Garret	Stelmor	Stelmor
Major Products		Low Carbon Steel / High Carbon Steel / High Tensile Steel / Free-cutting Steel / Tire Cord Steel	Piano Wire Rods / Bearing Steel / Spring Steel / Welding Steel / Free-cutting Steel / Tire Cord Steel / Carbon Steel for Cold Heading & Forging, Low-alloyed Steel / Carbon Steel for Machine Structural Use		

Accurate Inspection Conducted Prior to Delivering Good Quality Products.

Since the inspections during all the production processes from steelmaking via billet rolling to wire rod rolling are accurately conducted by the computers, All the products are produced in prime. Dimensional accuracy of the end product is assured through continuous, automated inspection processes. In addition, in order to produce superior wire rods, it goes through various kind of final product.

Test Item	Up-Set	Tensile Strength	Reduction of Area	Segregation	Decarburization	Cleanness Level	Structure
Low Carbon Steel Wire Rod	○	-	-	-	-	-	-
High Carbon Steel Wire Rod Piano Wire Rods	○	○	△	○	△	○	○
	○	○	○	○	○	○	○
Steel for Cold Heading & Forging							
Carbon Steel for Machine Structural Use	○	△	-	△	○	○	-
Free-Cutting Steel							
Bearing Steel	○	△	△	○	○	○	○
Spring Steel							

Applications

Low Carbon Steel

As a low carbon steel product containing 0.06~0.22% of C-content, it is used for producing various kinds of galvanized steel wires, nails and iron nets, etc.

- **POSCO** POSFIS5M1, 6M1, 6B
- **JIS** SWRM6~22
- **SAE** 1006~1022
- **DIN** D5-1, D9-1
- **ASTM** A510

High Carbon Steel

As a high carbon steel product, it is required to control the fine pearlite, in order to secure the maintenance of high strength and wire extendibility. It is used for wire ropes, precision springs, bead wires and common PC steel wires, etc.

- **JIS** SWRH27~82A/B
- **SAE** 1026~1095
- **BS** D26-2, 95-2

Piano Wire Steel

It is mainly used in applications for high-strength bead wires, LR PC steel wires, and music wires. It is a high carbon clean steel with extendibility of micro-wire, high strength and superior fatigue resistance.

- **POSCO** POSCABLE82, 86, 90, 92
POSMICRO62
- **JIS** SWRS62A/B~92A

Low-alloyed Steel

Material used for tightening major machine parts such as high strength bolts, nuts shafts & etc. Therefore, it is made with a high strength product added with alloying elements Cr, Ni and Mo and, etc.

- **POSCO** POSCM435, 440C, POSCH45FCR, POSCM13
POSMA45RM, POSTEN20W, 30W
- **JIS** SCR415~440/H, SCR415, 420, 440
- **SAE** 1541, 4037, 4140, 8740H

High Tensile Strength Steel

PC steel bar used for concrete utility poles and piles. It is the carbon steel for machine structural application added with small quantity of Boron or large quantity of Si. And it has a high elastic constraint and good tension release capability compared to common steel products.

- **POSCO** PSPC22, 30B~35B, 30SI~35SI, 32SIB/32SIBM
- **SAE** 10B30~35

Steel for Welding Wire

It is necessary to micro-control the elements to guarantee the welding performance and the material characteristics of deposited metal. And in order to secure the wire extendibility, TS bias control and slow-cooling of wire rods are applied. This product is used for CO2 electrodes, submerged and common ones, etc.

- **POSCO** POSWELD1A/1B/1CM, 2A/2B/2J/2S, 4B/4D, 23/41/50/60
- **JIS** SWRY11, SWRY11L

Carbon Steel for Cold Heading & Forging

Carbon steel wire rods made from cold forging are used for a wide range of applications, such as automobile components, industrial machinery, bolt, nut screw, in ways of cold-rolling, forging and extrusion, etc.

- **POSCO** POSCH6ASP
- **JIS** SWRCH6A~22A, 10K~50K
- **SAE** 1006~1060

Free-cutting Steel

As a kind of steel with which the machine capability is enhanced with some added free-cutting P and S etc., it is used for some materials of automobiles and home electronics parts.

- **POSCO** POSCUT1B, 2B, 3B, 1S
- **JIS** SUM11~43
- **SAE** SAE1215, 1146, 1151

⚠ These applications are for general reference only. For your specific application, please consult with our representative specializing in the products you wish to order.

Tire Cord Steel

It is used for automobile tire reinforcement materials, made of stranded codes after a wire extending process, that makes high carbon steel wire rods into micro wires. Diameter range from 0.4~0.15mm, and a strict quality control is implemented to endure the stress incurred from high speed processing.

- **POSCO** POSCORD70, 80, 90, 92CR, 92Si
- **AISI** 1069, 1070, 1080, 1090

Bearing Steel

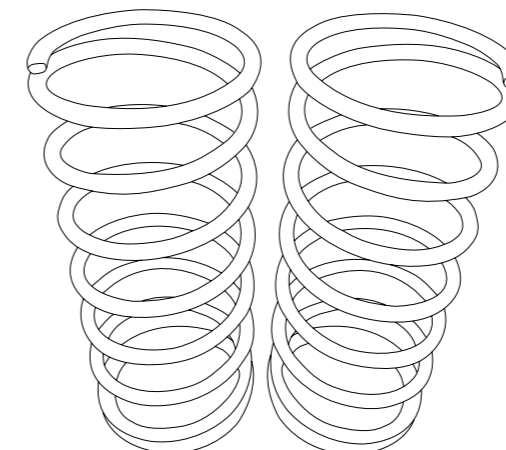
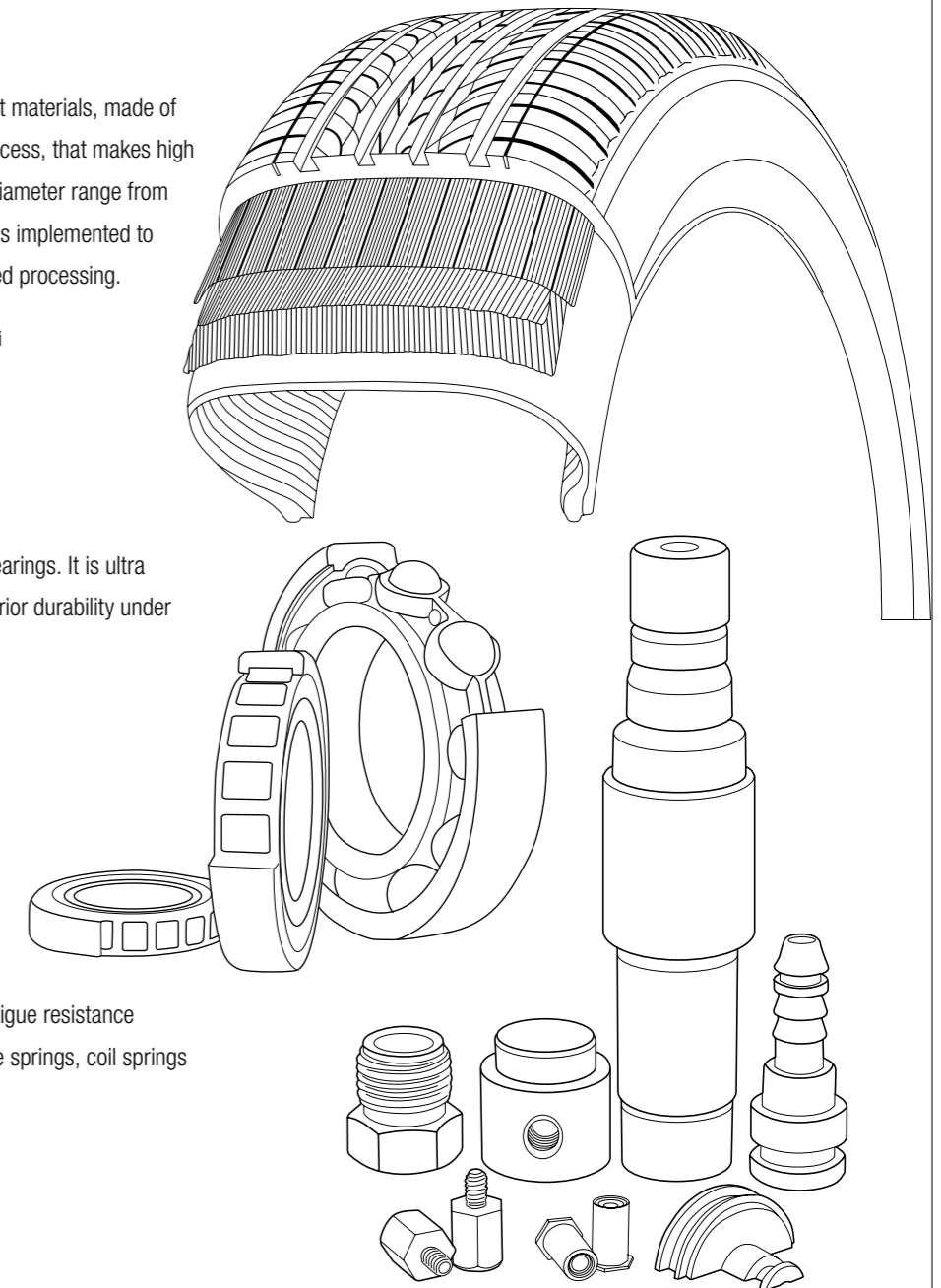
It is used for balls, rollers, and races of bearings. It is ultra clean high alloy steel materials, with superior durability under heavy loading.

- **POCO** POS55CR
- **JIS** SUJ1~5
- **SAE** 52100

Spring Steel

Ultra clean alloying steel, with superior fatigue resistance property. It is mostly used for engine valve springs, coil springs for suspensions and stabilizer bar.

- **POSCO** POSHIS120D/S,130D
- **JIS** SUP6, 7, 9/A/D, 11A, 12/12V
- **SAE** 9254/D/S/V/HV
- **DIN** 50CrV4, 54SiCrV6



Carbon Steel for Machine Structural Use

Carbon Steel for Machine Structural Use transmitting the drive-power of various kinds of shafts of machine parts, after being produced through hot working environment and surface finishing process.

- **JIS** S10~55C
- **SAE** 1022~1060

Quality Assurance

Tire Cord Steel

■ Tensile strength

Specification	Wire Rod	Steel Cord
POSCORD70S	961~1108MPa	2800MPa
POSCORD80S	1078~1216MPa	3200MPa
POSCORD92CR	1147~1274MPa	3600MPa

■ Internal Quality

Center Segregation	Micro Structure	Decarburization Depth
≤ 1(Grade)	Fine Pearlite (Resolvable Pearlite, Cementite, Martensite : Zero)	DM-T ≤ 0.10mm

Spring Steel

■ For Engine Valve

Size of Non-Metallic Inclusions	Decarburization Depth	Surface Defects
Max-T ≤ 15μm	DM-T ≤ 0.05mm	≤ 0.05mm

■ For Suspension

Specification	Decarburization Depth		Surface Defects
SAE9254	DM-F ≤ 0.03mm	DM-T ≤ 0.20mm	≤ 0.08mm
SAE9254S		DM-T ≤ 0.15mm	≤ 0.05mm
POSHS120D	DM-F ≤ 0.03mm	DM-T ≤ 0.20mm	≤ 0.08mm
POSHS120S		DM-T ≤ 0.15mm	≤ 0.05mm

Bearing Steel

■ Surface Quality

Wire rod size	Decarburization Depth / Surface Defects	Quality	Diameter tolerance
5.5~13.5mmΦ	≤ (0.01×Diameter)mm	≤ 0.30mm	±0.20mm
14.0~25.0mmΦ	≤ (0.008×Diameter)mm	≤ 0.35mm	±0.25mm
25.5~35.0mmΦ		≤ 0.40mm	±0.30mm
35.5~42.0mmΦ		≤ 0.50mm	±0.35mm

■ Non-metallic inclusion (ASTM E45 Method A)

(Unit : Grade)

Division	Sulfide		Alumina		Silicate		Oxide		DS Type	T(O)
	Thin	Heavy	Thin	Heavy	Thin	Heavy	Thin	Heavy		
*Special	1.5	1.0	1.0	0	0	0	0.5	0	1.5	≤ 10ppm
Common	2.0	1.0	1.5	0.5	0	0	1.0	0.5	1.5	≤ 12ppm

* Please consult with your POSCO representative before ordering this product.

Carbon Steel for Cold Heading & Forging

■ Surface Quality

Wire rod size	Quality	Diameter tolerance
5.5~13.5mmΦ	≤ 0.35mm	±0.25mm
14.0~25.0mmΦ	≤ 0.40mm	±0.30mm
25.5~33.5mmΦ	≤ 0.50mm	±0.40mm
34.0~42.5mmΦ	≤ 0.60mm	±0.50mm

Wire rod size	Surface Defects	
	Y1*, Y2*, Y4* Use	Y7* Use
5.5~13.5mmΦ	≤ 0.05mm	±0.03mm
14.0~34.0mmΦ	≤ 0.07mm	±0.05mm

Wire rod size	Decarburization Depth
5.5~14.5mmΦ	DM-T ≤ 0.15mm, DM-F ≤ 0.02mm
15.0~25.0mmΦ	DM-T ≤ 0.20mm, DM-F ≤ 0.03mm
25.5~42.0mmΦ	DM-T ≤ 0.25mm, DM-F ≤ 0.04mm

Specifications: Chemical Composition

Low Carbon Steel

■ JIS

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cu
SWRM6	0.08 Max.	-	0.60 Max.	0.045 Max.	0.045 Max.	-
SWRM8	0.10 Max.	-	0.60 Max.	0.045 Max.	0.045 Max.	-
SWRM10	0.08~0.13	-	0.30~0.60	0.045 Max.	0.045 Max.	-
SWRM12	0.10~0.15	-	0.30~0.60	0.045 Max.	0.045 Max.	-
SWRM15	0.13~0.18	-	0.30~0.60	0.045 Max.	0.045 Max.	-
SWRM17	0.15~0.20	-	0.30~0.60	0.045 Max.	0.045 Max.	-
SWRM20	0.18~0.23	-	0.30~0.60	0.045 Max.	0.045 Max.	-
SWRM22	0.20~0.25	-	0.30~0.60	0.045 Max.	0.045 Max.	-

Remarks) In case, it is specified as a kind of killed steel, the letter, 'K', is attached after the end of the marking word.

■ SAE/AISI

Product code	Chemical Compositions(%)				
	C	Si	Mn	P	S
1005	0.06 Max.		0.35 Max.	0.040 Max.	0.050 Max.
1006	0.08 Max.		0.25~0.40	0.040 Max.	0.050 Max.
1008	0.10 Max.		0.30~0.50	0.040 Max.	0.050 Max.
1010	0.08~0.13		0.30~0.60	0.040 Max.	0.050 Max.
1012	0.10~0.15		0.30~0.60	0.040 Max.	0.050 Max.
1013	0.11~0.16		0.50~0.80	0.040 Max.	0.050 Max.
1015	0.13~0.18	0.10 Max.	0.30~0.60	0.040 Max.	0.050 Max.
1016	0.13~0.18	0.10~0.20	0.60~0.90	0.040 Max.	0.050 Max.
1017	0.15~0.20	0.15~0.30	0.30~0.60	0.040 Max.	0.050 Max.
1018	0.15~0.20	0.20~0.40	0.60~0.90	0.040 Max.	0.050 Max.
1019	0.15~0.20	0.30~0.60	0.70~1.00	0.040 Max.	0.050 Max.
1020	0.18~0.23		0.30~0.60	0.040 Max.	0.050 Max.
1021	0.18~0.23		0.60~0.90	0.040 Max.	0.050 Max.
1022	0.18~0.23		0.70~1.00	0.040 Max.	0.050 Max.
1023	0.20~0.25		0.30~0.60	0.040 Max.	0.050 Max.
1025	0.22~0.28		0.30~0.60	0.040 Max.	0.050 Max.
1026	0.22~0.28		0.60~0.90	0.040 Max.	0.050 Max.

Remarks) The silicon content is different from specifications. Thus, please confirm it by consulting our associates.

High Carbon Steel

■ JIS

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cr
SWRH27	0.24~0.31	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH37	0.34~0.41	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH42A	0.39~0.46	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH42B	0.39~0.46	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH47A	0.44~0.51	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH47B	0.44~0.51	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH52A	0.49~0.56	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH52B	0.49~0.56	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH57A	0.54~0.61	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH57B	0.54~0.61	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH62A	0.59~0.66	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH62B	0.59~0.66	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH67A	0.64~0.71	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH67B	0.64~0.71	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH72A	0.69~0.76	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH72B	0.69~0.76	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH77A	0.74~0.81	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH77B	0.74~0.81	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-
SWRH82A	0.79~0.86	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.	-
SWRH82B	0.79~0.86	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.	-

Remarks) The carbon content specified (in the table) can be reduced by 0.01% from the maximum or increased by 0.01% from the minimum subject to customer agreement.

Specifications: Chemical Composition

■ SAE/AISI

Product code	Chemical Compositions(%)				
	C	Si	Mn	P	S
1029	0.25~0.31		0.60~0.90	0.040 Max.	0.050 Max.
1030	0.28~0.34		0.60~0.90	0.040 Max.	0.050 Max.
1035	0.32~0.38		0.60~0.90	0.040 Max.	0.050 Max.
1037	0.35~0.38		0.70~1.00	0.040 Max.	0.050 Max.
1038	0.35~0.42		0.60~0.90	0.040 Max.	0.050 Max.
1039	0.37~0.44		0.70~1.00	0.040 Max.	0.050 Max.
1040	0.37~0.44		0.60~0.90	0.040 Max.	0.050 Max.
1042	0.40~0.47		0.60~0.90	0.040 Max.	0.050 Max.
1043	0.40~0.47		0.70~1.00	0.040 Max.	0.050 Max.
1044	0.43~0.50		0.30~0.60	0.040 Max.	0.050 Max.
1045	0.43~0.50		0.60~0.90	0.040 Max.	0.050 Max.
1046	0.43~0.50	0.10 Max.	0.70~1.00	0.040 Max.	0.050 Max.
1049	0.46~0.53	0.07~0.15	0.60~0.90	0.040 Max.	0.050 Max.
1050	0.48~0.55	0.10~0.20	0.60~0.90	0.040 Max.	0.050 Max.
1053	0.48~0.55	0.15~0.30	0.70~1.00	0.040 Max.	0.050 Max.
1055	0.50~0.60	0.20~0.40	0.60~0.90	0.040 Max.	0.050 Max.
1059	0.55~0.65	0.30~0.60	0.50~0.80	0.040 Max.	0.050 Max.
1060	0.55~0.65		0.60~0.90	0.040 Max.	0.050 Max.
1064	0.60~0.70		0.50~0.80	0.040 Max.	0.050 Max.
1065	0.60~0.70		0.60~0.90	0.040 Max.	0.050 Max.
1069	0.65~0.75		0.40~0.70	0.040 Max.	0.050 Max.
1070	0.65~0.75		0.60~0.90	0.040 Max.	0.050 Max.
1074	0.70~0.80		0.50~0.80	0.040 Max.	0.050 Max.
1075	0.70~0.80		0.40~0.70	0.040 Max.	0.050 Max.
1078	0.72~0.85		0.30~0.60	0.040 Max.	0.050 Max.
1080	0.75~0.88		0.60~0.90	0.040 Max.	0.050 Max.
1084	0.80~0.93		0.60~0.90	0.040 Max.	0.050 Max.
1085	0.80~0.93		0.70~1.00	0.040 Max.	0.050 Max.
1086	0.80~0.93		0.30~0.50	0.040 Max.	0.050 Max.
1090	0.85~0.98		0.60~0.90	0.040 Max.	0.050 Max.
1095	0.90~1.03		0.30~0.50	0.040 Max.	0.050 Max.

Remarks) The silicon content is different from specifications. Thus, please confirm it by consulting our associates.

Piano Steel

■ JIS

Product code	Chemical Compositions(%)						
	C	Si	Mn	P	S	Cu	Cr
SWRS62A	0.60~0.65	0.12~0.32	0.30~0.60	0~0.025	0~0.025	0~0.20	-
SWRS62B	0.60~0.65	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS67A	0.65~0.70	0.12~0.32	0.30~0.60	0~0.025	0~0.025	0~0.20	-
SWRS67B	0.65~0.70	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS72A	0.70~0.75	0.12~0.32	0.30~0.60	0~0.025	0~0.025	0~0.20	-
SWRS72B	0.70~0.75	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS77A	0.75~0.82	0.12~0.32	0.30~0.60	0~0.030	0~0.030	0~0.20	-
SWRS77B	0.75~0.80	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS80B	0.78~0.83	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS82A	0.80~0.85	0.12~0.32	0.30~0.60	0~0.025	0~0.025	0~0.20	-
SWRS82B	0.80~0.85	0.12~0.32	0.60~0.90	0~0.025	0~0.025	0~0.20	-
SWRS92A	0.90~0.95	0.12~0.32	0.30~0.60	0~0.025	0~0.025	0~0.20	-

Specifications: Chemical Composition

Steel for Welding Wire

■ JIS

Product code	Chemical Compositions(%)							
	C	Si	Mn	P	S	Al	Cu	Tl+Zr
SWRY11	0.09 Max.	0.03 Max.	0.35~0.65	0.02 Max.	0.023 Max.	-	0.20 Max.	-
SWRY11L	0.08 Max.	0.03 Max.	0.35~0.65	0.013 Max.	0.010 Max.	-	0.10 Max.	-

Spring Steel

■ JIS

Product code	Chemical Compositions(%)							Others
	C	Si	Mn	P	S	Cr		
SUP6	0.56~0.64	1.50~1.80	0.70~1.00	0.035 Max.	0.035 Max.	-	-	
SUP7	0.56~0.64	1.80~2.20	0.70~1.00	0.035 Max.	0.035 Max.	-	-	
SUP9	0.52~0.60	0.15~0.35	0.65~0.95	0.035 Max.	0.035 Max.	0.65~0.95	-	
SUP9A	0.56~0.64	0.15~0.35	0.70~1.00	0.035 Max.	0.035 Max.	0.70~1.00	-	
SUP11A	0.56~0.64	0.15~0.35	0.70~1.00	0.035 Max.	0.035 Max.	0.70~1.00	B : 0.0005Min	
SUP12	0.51~0.59	0.20~1.60	0.60~0.90	0.035 Max.	0.035 Max.	0.60~0.90	-	

Remarks) The maximum Cu content is 0.30%.

■ SAE/DIN

Product code	Chemical Compositions(%)							Others
	C	Si	Mn	P	S	Cr		
SAE9254	0.51~0.59	1.20~1.60	0.60~0.80	0.035 Max.	0.040 Max.	0.60~0.80	-	
DIN-50CRV4	0.47~0.55	0.15~0.40	0.70~1.10	0.030 Max.	0.030 Max.	0.90~1.20	V : 0.10~0.20	
DIN-54SICRV6	0.51~0.59	1.20~1.60	0.50~0.80	0.035 Max.	0.040 Max.	0.50~0.80	V : 0.10~0.20	

Remarks) The maximum Cu content is 0.30%.

Bearing Steel

■ JIS

Product code	Chemical Compositions(%)							
	C	Si	Mn	P	S	Cr	Mo	Others
SUJ1	0.95~1.10	0.15~0.35	0.50 Max.	0.25 Max.	0.25 Max.	0.90~1.20	0.08 Max.	Cu : 0.20 Max. Ni : 0.25 Max.
SUJ2	0.95~1.10	0.15~0.35	0.50 Max.	0.25 Max.	0.25 Max.	1.30~1.60	0.08 Max.	
SUJ3	0.95~1.10	0.40~0.70	0.90~1.15	0.25 Max.	0.25 Max.	0.90~1.20	0.08 Max.	
SUJ4	0.95~1.10	0.15~0.35	0.50 Max.	0.25 Max.	0.25 Max.	1.30~1.60	0.10~0.25	
SUJ5	0.95~1.10	0.40~0.70	0.90~1.15	0.25 Max.	0.25 Max.	0.90~1.20	0.10~0.25	

Remarks) In accordance with the general agreement between producer and customer, non-listed elements may be present in the final product in quantities not to exceed 0.25%.

Free-cutting Steel

■ JIS

Product code	Chemical Compositions(%)			
	C	Mn	P	S
SUM11	0.08~0.13	0.30~0.60	0.040 Max.	0.08~0.13
SUM12	0.08~0.13	0.60~0.90	0.040 Max.	0.08~0.13
SUM21	0.13 Max.	0.70~1.00	0.07~0.12	0.16~0.23
SUM22	0.13 Max.	0.70~1.00	0.07~0.12	0.24~0.33
SUM23	0.09 Max.	0.75~1.05	0.04~0.09	0.26~0.35
SUM25	0.15 Max.	0.90~1.40	0.07~0.12	0.30~0.40
SUM31	0.14~0.20	1.00~1.30	0.040 Max.	0.08~0.13
SUM32	0.12~0.20	0.60~1.10	0.040 Max.	0.10~0.20
SUM41	0.32~0.39	1.35~1.65	0.040 Max.	0.08~0.13
SUM42	0.37~0.45	1.35~1.65	0.040 Max.	0.08~0.13
SUM43	0.40~0.48	1.35~1.65	0.040 Max.	0.24~0.33

Remarks) Silicon content is not specified in principle. Depending on application, the amount will be decided upon by agreement between buyer and supplier. The range or limiting value can be chosen from among three conditions: less than 0.10%, between 0.10~0.20%, or between 0.15~0.35%.

■ SAE/AISI

Product code	Chemical Compositions(%)				
	C	Si	Mn	P	S
1108	0.08~0.13	-	0.50~0.80	0.040 Max.	0.08~0.13
1110	0.08~0.13	0.10 Max.	0.30~0.60	0.040 Max.	0.08~0.13
1117	0.14~0.20	-	1.00~1.30	0.040 Max.	0.08~0.13
1118	0.12~0.20	-	1.30~1.60	0.040 Max.	0.08~0.13
1137	0.32~0.39	0.10 Max.	1.35~1.65	0.040 Max.	0.08~0.13
1139	0.35~0.43	0.10~0.20	1.35~1.65	0.040 Max.	0.13~0.20
1140	0.37~0.44	0.15~0.35	0.70~1.00	0.040 Max.	0.08~0.13
1141	0.37~0.45	-	1.35~1.65	0.040 Max.	0.08~0.13
1144	0.40~0.48	-	1.35~1.65	0.040 Max.	0.24~0.33
1146	0.42~0.49	-	0.70~1.00	0.040 Max.	0.08~0.13
1151	0.48~0.55	-	0.70~1.00	0.040 Max.	0.08~0.13
1211	0.13 Max.	-	0.60~0.90	0.07~0.12	0.10~0.15
1212	0.13 Max.	-	0.70~1.00	0.07~0.12	0.16~0.23
1213	0.13 Max.	-	0.70~1.00	0.07~0.12	0.24~0.33
1214	0.09 Max.	-	0.75~1.05	0.04~0.09	0.26~0.35
1215	0.09 Max.	-	0.75~1.05	0.04~0.09	0.26~0.35

Specifications: Chemical Composition

Carbon Steel for Cold Heading & Forging

■ JIS

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Al
SWRCH6A	0.08 Max.	0.10 Max.	0.60 Max.	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH8A	0.10 Max.	0.10 Max.	0.60 Max.	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH10A	0.08~0.13	0.10 Max.	0.30~0.60	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH12A	0.10~0.15	0.10 Max.	0.30~0.60	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH15A	0.13~0.18	0.10 Max.	0.30~0.60	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH16A	0.13~0.18	0.10 Max.	0.60~0.90	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH18A	0.15~0.20	0.10 Max.	0.60~0.90	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH19A	0.15~0.20	0.10 Max.	0.70~1.00	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH20A	0.18~0.23	0.10 Max.	0.30~0.60	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH22A	0.18~0.23	0.10 Max.	0.70~1.00	0.030 Max.	0.035 Max.	0.02 Min.
SWRCH10K	0.08~0.13	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH12K	0.10~0.15	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH15K	0.13~0.18	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH16K	0.13~0.18	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH17K	0.15~0.20	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH18K	0.15~0.20	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH20K	0.18~0.23	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH22K	0.18~0.23	0.10~0.35	0.70~1.00	0.030 Max.	0.035 Max.	-
SWRCH24K	0.19~0.25	0.10~0.35	1.35~1.65	0.030 Max.	0.035 Max.	-
SWRCH25K	0.22~0.28	0.10~0.35	0.30~0.60	0.030 Max.	0.035 Max.	-
SWRCH27K	0.22~0.29	0.10~0.35	1.20~1.50	0.030 Max.	0.035 Max.	-
SWRCH30K	0.27~0.33	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH33K	0.30~0.36	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH35K	0.32~0.38	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH38K	0.35~0.41	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH40K	0.37~0.43	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH41K	0.36~0.44	0.10~0.35	1.35~1.65	0.030 Max.	0.035 Max.	-
SWRCH43K	0.40~0.46	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH45K	0.42~0.48	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH48K	0.45~0.51	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-
SWRCH50K	0.47~0.53	0.10~0.35	0.60~0.90	0.030 Max.	0.035 Max.	-

Low-alloyed Steel

■ JIS

Product code	Chemical Compositions(%)								
	C	Si	Mn	P	S	Al	Cu	Ti+Zr	
Ni I Cr	SNC236	0.32~0.40	0.15~0.35	0.50~0.80	0.030 Max.	0.030 Max.	1.00~1.50	0.50~0.90	Cu 0.30 Max.
	SNC415	0.12~0.18		2.00~2.50			0.20~0.50		
	SNC631	0.27~0.35		2.50~3.00			0.60~1.00		
	SNC815	0.12~0.18		3.00~3.50			0.70~1.00		
	SNC836	0.32~0.40		3.00~3.50			0.60~1.00		
Ni I Cr I Mo	SNCM220	0.17~0.23	0.15~0.35	0.60~0.90	0.030 Max.	S 0.030 Max. Cu 0.30 Max.	0.40~0.70	0.40~0.65	0.15~0.30
	SNCM240	0.38~0.43		0.70~1.00					
	SNCM415	0.12~0.18		0.40~0.70					
	SNCM420	0.17~0.23		0.60~0.90					
	SNCM431	0.27~0.35							
	SNCM439	0.36~0.43		0.80~1.20					
	SNCM447	0.44~0.50							
	SNCM616	0.13~0.20		0.35~0.60					
	SNCM625	0.20~0.30							
	SNCM630	0.25~0.35							
SNCM815	0.12~0.18	0.30~0.60							
Cr	SCr415	0.13~0.18	0.15~0.35	0.60~0.85	0.030 Max.	0.030 Max.	0.25 Max.	0.90~1.20	Cu 0.30 Max.
	SCr420	0.18~0.23							
	SCr430	0.28~0.33							
	SCr435	0.33~0.38							
	SCr440	0.38~0.43							
	SCr445	0.43~0.48							
Cr I Mo	SCM415	0.13~0.18	0.15~0.35	0.60~0.85	0.030 Max.	0.030 Max.	Ni 0.25 Max.	0.90~1.20	0.15~0.30
	SCM418	0.16~0.21							
	SCM420	0.18~0.23		0.60~0.85					
	SCM421	0.17~0.23		0.30~0.60					
	SCM430	0.28~0.33							
	SCM432	0.27~0.37		0.60~0.85					
	SCM435	0.33~0.38							
	SCM440	0.38~0.43							
	SCM445	0.43~0.48		0.90~1.20					
	SCM822	0.20~0.25							
Mn	SMn420	0.17~0.23	0.15~0.35	1.20~1.50	0.030 Max.	0.030 Max.	0.25 Max.	0.35 Max.	Cu 0.30 Max.
	SMn433	0.30~0.36							
	SMn438	0.35~0.41							
	SMn443	0.40~0.46							
Cr	SMnC420	0.17~0.23	0.15~0.35	1.20~1.50	0.030 Max.	0.030 Max.	0.25 Max.	0.35~0.70	Cu 0.30 Max.
	SMnC430	0.40~0.46		1.35~1.65					

Specifications: Chemical Composition

■ SAE/AISI

Product code	Chemical Compositions(%)							
	C	Si	Mn	P	S	Ni	Cr	Mo
1513	0.10~0.16	0.10 Max.	1.10~1.40	0.40 Max.	0.050 Max.	-	-	-
1522	0.18~0.24	0.15~0.30	1.10~1.40	0.40 Max.	0.050 Max.	-	-	-
1524	0.19~0.25	0.20~0.40	1.35~1.65	0.40 Max.	0.050 Max.	-	-	-
1526	0.22~0.29	-	1.10~1.40	0.40 Max.	0.050 Max.	-	-	-
1527	0.22~0.29	-	1.20~1.50	0.40 Max.	0.050 Max.	-	-	-
1536	0.30~0.37	-	1.20~1.50	0.40 Max.	0.050 Max.	-	-	-
1541	0.36~0.44	0.10~0.20	1.35~1.65	0.40 Max.	0.050 Max.	-	-	-
1548	0.44~0.52	0.20~0.40	1.10~1.40	0.40 Max.	0.050 Max.	-	-	-
4118	0.18~0.23	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.40~0.60	0.08~0.15
4130	0.28~0.33	0.15~0.30	0.40~0.60	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4135	0.33~0.38	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4137	0.35~0.40	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4140	0.38~0.43	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4142	0.40~0.45	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4145	0.43~0.48	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4147	0.45~0.50	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4150	0.48~0.53	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.80~1.10	0.15~0.25
4161	0.56~0.64	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	-	0.70~0.90	0.25~0.35
5115	0.13~0.18	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.70~0.90	-
5120	0.17~0.22	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.70~0.90	-
5130	0.28~0.33	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.80~1.10	-
5132	0.30~0.35	0.15~0.30	0.60~0.80	0.35 Max.	0.040 Max.	-	0.75~1.00	-
5135	0.33~0.38	0.15~0.30	0.60~0.80	0.35 Max.	0.040 Max.	-	0.80~1.05	-
5140	0.38~0.43	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	-	0.70~0.90	-
8620	0.18~0.23	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8622	0.20~0.25	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8625	0.23~0.28	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8627	0.25~0.30	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8630	0.28~0.33	0.15~0.30	0.70~0.90	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8637	0.35~0.40	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8640	0.38~0.43	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8642	0.40~0.45	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25
8645	0.43~0.48	0.15~0.30	0.75~1.00	0.35 Max.	0.040 Max.	0.40~0.70	0.40~0.65	0.15~0.25

Carbon Steel for Machine Structural Use

■ JIS

Product code	Chemical Compositions(%)				
	C	Si	Mn	P	S
S10C	0.08~0.13	0.15~0.35	0.30~0.60	0.030 Max.	0.035 Max.
S12C	0.10~0.15	0.15~0.35	0.30~0.60	0.030 Max.	0.035 Max.
S15C	0.13~0.18	0.15~0.35	0.30~0.60	0.030 Max.	0.035 Max.
S17C	0.15~0.20	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.
S20C	0.18~0.23	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.
S22C	0.20~0.25	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.
S25C	0.22~0.28	0.15~0.35	0.30~0.60	0.030 Max.	0.030 Max.
S28C	0.25~0.31	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.
S30C	0.27~0.33	0.15~0.35	0.60~0.90	0.030 Max.	0.030 Max.
S33C	0.30~0.36	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S35C	0.32~0.38	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S38C	0.35~0.41	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S40C	0.37~0.43	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S43C	0.40~0.46	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S45C	0.42~0.48	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S48C	0.45~0.51	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S50C	0.47~0.53	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S53C	0.50~0.56	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S55C	0.52~0.58	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S58C	0.55~0.61	0.15~0.35	0.60~0.90	0.030 Max.	0.025 Max.
S09CK	0.07~0.12	0.15~0.35	0.30~0.60	0.025 Max.	0.025 Max.
S15CK	0.13~0.18	0.15~0.35	0.30~0.60	0.025 Max.	0.025 Max.
S20CK	0.18~0.23	0.15~0.35	0.30~0.60	0.025 Max.	0.025 Max.

Remarks) 1. Cu, Ni, Cr and Ni + Cr amounts included in S09CK, S15CK and S20CK steels must not exceed 0.25%, 0.20%, 0.20% and 0.30% respectively.

For all other steels these amounts must not exceed 0.30%, 0.20%, 0.20% and 0.35% respectively.

2. In the case that a buyer requests a chemical analysis, the tolerances of the product analysis follow the specifications listed in Table 2 of JIS G 0321.

Specifications: Chemical Composition

POSCO Standard

Low Carbon Steel

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cu
POSFIS5M1	0.02 Max.	0.07 Max.	0.10~0.40	0.030 Max.	0.030 Max.	-
POSFIS6M1	0.04 Max.	0.07 Max.	0.20~0.50	0.040 Max.	0.040 Max.	-
POSFIS6B	0.05 Max.	0.07 Max.	0.60 Max.	0.040 Max.	0.040 Max.	-

High Carbon Steel for Micro Cable

Product code	Chemical Compositions(%)						
	C	Si	Mn	P	S	Cu	Cr
POSMICRO62	0.58~0.66	0.10~0.30	0.30~0.70	0.020 Max.	0.020 Max.	0.020 Max.	0.020 Max.

High Carbon Steel for Bridge Cable

Product code	Chemical Compositions(%)						
	C	Si	Mn	P	S	Cu	Cr
POSCABLE82	0.79~0.86	0.70~1.10	0.60~0.90	0.020 Max.	0.020 Max.	0.020 Max.	0.10 Max.
POSCABLE86	0.82~0.89	0.70~1.10	0.60~0.90	0.020 Max.	0.020 Max.	0.020 Max.	0.10 Max.
POSCABLE90	0.87~0.94	1.00~1.40	0.30~0.60	0.020 Max.	0.020 Max.	0.020 Max.	0.15~0.45
POSCABLE92	0.89~0.96	1.10~1.50	0.30~0.60	0.020 Max.	0.020 Max.	0.030 Max.	0.15~0.45

Tire Cord Steel

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cr
Class1 POSCORD70S	0.65~0.75	0.15~0.30	0.30~0.60	0.030 Max.	0.030 Max.	-
Class2 POSCORD80S	0.75~0.88	0.15~0.30	0.30~0.60	0.030 Max.	0.030 Max.	-
Class3 POSCORD90 POSCORD92CR	0.90~0.96	0.15~0.30	0.30~0.60	0.030 Max.	0.030 Max.	-
	0.90~0.96	0.15~0.30	0.30~0.60	0.030 Max.	0.030 Max.	0.10~0.30

High Tensile Strength Steel

Product code	Chemical Compositions(%)							
	C	Si	Mn	P	S	Cu	B	Ti
Class1 PSPC22 PSPC30B PSPC32B PSPC35B	0.20~0.25	0.10~0.40	0.70~1.00	0.035 Max.	0.030 Max.	-	50ppm Max.	-
	0.27~0.32	0.15~0.35	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	5ppm Min.	-
	0.29~0.34	0.15~0.35	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	5ppm Min.	-
	0.32~0.38	0.15~0.35	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	5ppm Min.	-
Class2 PSPC30SI PSPC32SI PSPC35SI	0.27~0.32	1.60~1.90	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	-	-
	0.29~0.34	1.60~1.90	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	-	-
	0.32~0.38	1.60~1.90	0.60~0.90	0.035 Max.	0.030 Max.	0.020 Max.	-	-
Class3 PSPC32SIB PSPC32SIBM	0.29~0.36	0.50~2.00	0.55~0.95	0.035 Max.	0.030 Max.	0.020 Max.	5ppm Min.	0.01~0.06
	0.29~0.36	0.50~2.00	0.80~1.20	0.030 Max.	0.025 Max.	0.250 Max.	5ppm Min.	0.01~0.05

Steel for Welding Wire

Product code	Chemical Compositions(%)							Remark
	C	Si	Mn	P	S	Cu		
POSWELD1A	0.15 Max.	0.40~1.00	0.85~1.60	0.030 Max.	0.030 Max.	0.50 Max.	-	
POSWELD1B		0.40~1.00	1.00~1.60				Al : 0.1 Max. Ti+Zr : 0.13 Max	
POSWELD1C	0.07 Max.	0.40~0.70	0.90~1.40	0.030 Max.	0.030 Max.	0.50 Max.	Al : 0.05~0.15 Max. V, Ni : 0.05~0.15 Max. V, Ni : 0.02~0.12 Max.	
POSWELD1CM	0.05~0.15	0.30~0.80	0.60~1.50				Cr : 1.0~1.5 Mo : 0.4~0.65	
POSWELD2A	0.15 Max.	0.55~1.10	1.25~1.90	0.030 Max.	0.030 Max.	0.50 Max.	-	
POSWELD2B	0.15 Max.	0.55~1.10	1.40~1.90				Al : 0.10 Max. Ti+Zr : 0.30 Max	
POSWELD2J	0.08 Max.	0.55~1.10	1.25~1.60	0.030 Max.	0.01~0.03	0.50 Max.	-	
POSWELD2S	0.08 Max.	0.55~1.10	1.25~1.90				Mo:0.40~0.65	
POSWELD2MO	0.07~0.12	0.50~0.80	1.60~2.10	0.025 Max.	0.025 Max.	0.50 Max.	Cr : 1.0~1.5 Mo : 0.4~0.65	
POSWELD3CM	0.05~0.15	0.30~0.80	0.50~0.80	0.025 Max.	0.025 Max.	0.20 Max.	Al : 0.10 Max. Ti+Zr : 0.30 Max	
POSWELD4B	0.15 Max.	0.55~1.10	1.40~2.60	0.025 Max.	0.025 Max.	0.50 Max.	Ni : 0.15 Max. Cr : 0.15 Max. Mo : 0.60 Max. Ti+Zr : 0.30 Max.	
POSWELD4D								
POSWELD23	0.13 Max.	0.15~0.45	0.80~1.30	0.030 Max.	0.030 Max.	0.50 Max.	-	
POSWELD41	0.17 Max.	0.05 Max.	1.80~2.20	0.030 Max.	0.030 Max.			
POSWELD50	0.15 Max.	0.05 Max.	1.80~2.20	0.030 Max.	0.030 Max.	0.50 Max.	-	
POSWELD60	0.17 Max.	0.2 Max.	1.65~2.15	0.030 Max.	0.030 Max.		0.35 Max.	Mo:0.45~0.65
POSWELD12K	0.06~0.15	0.20~0.65	1.50~2.00	0.025 Max.	0.025 Max.	0.35 Max.	Mo:0.40~0.60	

Specifications: Chemical Composition

■ Spring Steel

Product code	Chemical Compositions(%)						
	C	Si	Mn	P	S	Cr	Other
POSHIS120D	0.40~0.54	1.80~2.60	0.50~1.00	0.025 Max.	0.025 Max.	0.50~1.50	V, Ni
POSHIS120S	0.46~0.60	1.20~2.00	0.50~1.00	0.025 Max.	0.025 Max.	0.50~1.00	V, Ni
POSHIS130D	0.51~0.59	1.80~2.60	0.50~1.00	0.025 Max.	0.025 Max.	0.50~1.50	V, Ni, B, Ti

■ Steel for Oil Tempered Wire

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cu
POT62C	0.60~0.65	0.15~0.30	0.85~1.15	0.020 Max.	0.020 Max.	0.20 Max.
POT67C	0.65~0.70	0.15~0.30	0.85~1.15	0.020 Max.	0.020 Max.	0.20 Max.
POT70C	0.66~0.71	0.15~0.30	0.80~1.10	0.020 Max.	0.020 Max.	0.15 Max.

■ Free-cutting Steel

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	Cu
POSCUT1A	0.13 Max.	-	1.0~1.50	0.06~0.12	0.24~0.40	0.04~0.30
POSCUT1S	0.09 Max.	0.15 Max.	0.75~2.0	0.04~0.09	0.26~0.60	-
PSW10	0.08~0.13	0.15 Max.	0.60~0.90	0.06~0.10	0.035 Max.	-

■ Steel for Spark Plug

Product code	Chemical Compositions(%)					
	C	Si	Mn	P	S	S-Al
POSCH6ASP	0.08 Max.	0.07 Max.	0.25~0.45	0.030 Max.	0.030 Max.	0.02 Min.

■ Soft Magnetic Iron

Product code	Chemical Compositions(%)				
	C	Si	Mn	P	S
JIS-SUYB1	0.01 Max.	0.05 Max.	0.20~0.30	0.020 Max.	0.015 Max.

■ Weather Resistance Steel

Product code	Chemical Compositions(%)								
	C	Si	Mn	P	S	S-Al	Cu	Ni	Cr
POSTEN20W	0.20~0.25	0.15~0.25	0.70~0.90	0.030 Max.	0.030 Max.	0.03~0.08	0.30~0.50	0.30~0.50	0.60~0.90

■ Micro-alloyed Steel

Product code	Chemical Compositions(%)								
	C	Si	Mn	P	S	S-Al	Ni	V	N(ppm)
POSMA40	0.35~0.45	0.40~0.90	0.80~1.20	0.025 Max.	0.08 Max.	0.01~0.08	-	0.12 Max.	150 Max.
POSMA45R	0.43~0.47	0.20~0.40	1.10~1.50	0.030 Max.	0.060 Max.	0.01~0.07	0.20 Max.	0.11 Max.	120 Max.
POSMA45RS	-	-	-	-	-	-	-	-	-

Manufacturable Dimensions

Available sizes

Wire Rod Mill	Unit	Size(mm, inch)																			
		5.5	6.5	7.0	-	8.0	8.5	9.0	-	10.0	-	11.0	12.0	-	13.0	-	14.0	-	-	-	
#1 Wire Rod Mill	mm	5.5	6.5	7.0	-	8.0	8.5	9.0	-	10.0	-	11.0	12.0	-	13.0	-	14.0	-	-	-	
	inch	0.216	0.256	0.276	-	0.315	0.335	0.354	-	0.394	-	0.433	0.472	-	0.512	-	0.551	-	-	-	
#2 Wire Rod Mill	mm	8.0	9.0	10.0	-	11.0	12.0	13.0	-	14.0	-	15.0	16.0	-	17.0	-	18.0	-	19.0	-	20.0
	inch	0.315	0.354	0.394	-	0.433	0.472	0.512	-	0.551	-	0.591	0.630	-	0.669	-	0.709	-	0.748	-	0.787
	mm	21.0	22.0	23.0	-	24.0	25.0	26.0	-	27.0	-	28.0	30.0	-	32.0	-	34.0	-	38.0	-	42.0
#3 Wire Rod Mill	mm	5.5	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0
	inch	0.216	0.256	0.267	0.295	0.315	0.335	0.354	0.374	0.394	0.413	0.433	0.472	0.492	0.512	0.531	0.551	0.571	0.591	0.610	0.630
#4 Wire Rod Mill	mm	5.5	6.5	7.0	7.5	8.0	8.5	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0
	inch	0.216	0.256	0.267	0.295	0.315	0.335	0.354	0.394	0.433	0.472	0.512	0.551	0.591	0.630	0.669	0.709	0.748	0.787	0.827	0.866

※ The available sizes are subject to change. Please consult with the POSCO representative before ordering.

Coil Dimensions

Division	Diameter (mm/inch)	Coil Weight		Min. Inner Dia. / Max. Outer Dia. / Max. Length		Coil Direction
		lbs	Kg	mm	inch	
#1 Wire Rod Mill	5.5~13.0/ 0.216~0.512	4,400	1,300~ 2,000	850/1500/1900		Counter clock wise
#2 Wire Rod Mill	5.5~42.0/ 0.216~1.654			850/1700/1900		
#3 Wire Rod Mill	5.5~16.0/ 0.216~0.630			850/1500/1900		
#4 Wire Rod Mill	5.5~22.0/ 0.216~0.866			850/1250/1900		

Product packaging and Shipping

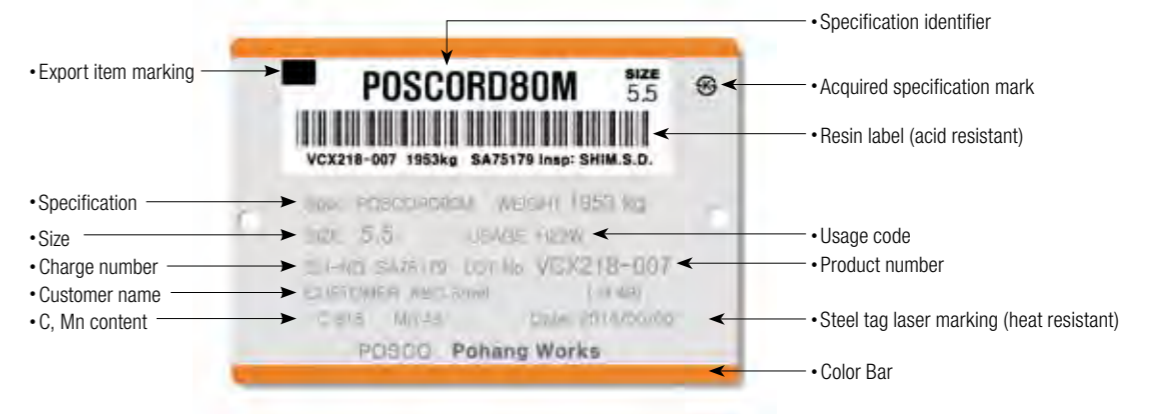
Product packaging

In order to avoid Various damages that can occur during the shipping and handling process, POSCO has adopted the following proven packaging methods. Upon customer request, pre-order information or consultation shall be provided.



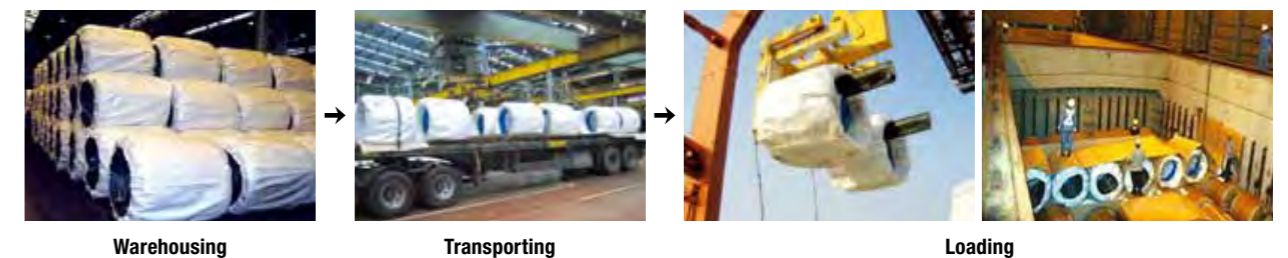
Labeling

To provide increased visibility and positive product identification, a resin label with white background is added after the pickling process. Also, a steel tag laser marking is applied as well, in case the resin label should be damaged during a subsequent heating process.

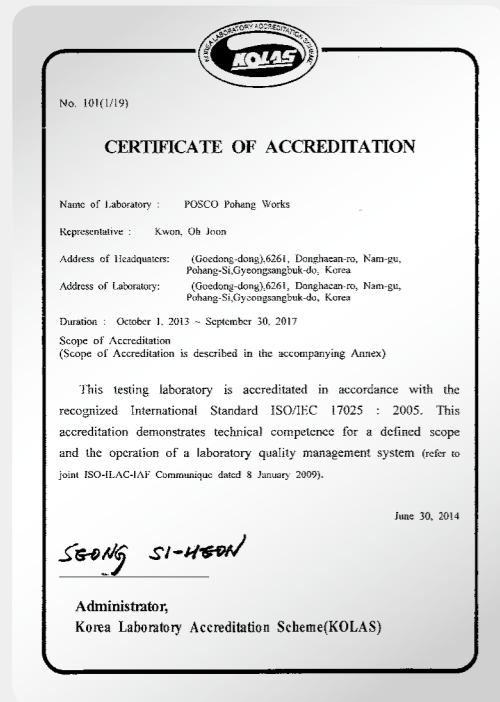


Damage prevented during shipping and handling processes

In order to prevent damages that could occur after wire rod rolling, POSCO uses special equipment and standardized work processes throughout packing, warehousing, transporting and loading.



Certificates



KOLAS



ISO/TS 16949:2009



ISO 9001:2008





ISO 14001:2004

WIRE ROD

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