Pasargad Steel Complex(PJS)

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Products:

Product type:	Billet & Bloom			
Section Size(mm):	Square/ Rectangular	130x130 ÷ 220x220 ÷ 220x280	Length(m):	Up to 12
Productive Grades:	3SP, 5SP, Q195, Q235, ASTM(A1006-A1008-A1010), RSt34			
Delivery Conditions:	As-cast			

Product type:	Billet & Bloom			
Size(mm):	Square/Rectangular Round(Ø)	200x200 ÷ 270x330 ÷ 280x380 250 ÷ 450	Length(m):	Up to 12*
Productive Grades:	X52, L80(1-9Cr), P110, C110, N95, SG2, SWRH82B			
Delivery Conditions:	As-cast			

*The maximum length for products with a section larger than Ø400 or 270×330 will be 6m.

Product type:	Rolled Billet			
Section Size(mm):	Square Round(Ø)	90x90 ÷ 160x160 80 ÷ 200	Length(m):	Up to 12
Productive Grades:	(10-75)CK group, 25CrMo4, 42CrMo4, 18CrNi8, 34CrNiMo6, 18CrNiMo7-6, 27MnCrB5-2, 16MnCr5, 20MnCr5, 38MnB5, 38MnVS6, 30CrNiMo8			
Delivery Conditions:	As rolled			

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Product type:	Bar			
Section Size(mm):	Round(Ø)	16 ÷ 80	Length(m):	Up to 12
	Flat	Thickness 6÷60 - Width 12÷110		
Productive Grades:	100Cr6, 100CrMo7, 55Cr3, 51CrV4, 52CrMoV4, 60SiCr7, 38Si7, (10-75)CK group, 25CrMo4, 42CrMo4, 18CrNi8, 34CrNiMo6, 18CrNiMo7-6, 27MnCrB5-2, 20MnCr5, 38MnB5, 33B2, 30MnB4, 31CrMoB2-1, C(10-15-20)C, SAE10B(21-35-38), 38MnVS6, 30CrNiMo8			
Delivery Conditions:	As rolled Spheroidized Soft annealed Sub-critical annealed Normalized Isothermal annealed Black bar post treated (straightness lower than 1 mm/m without any residual stress)			

Product type:	Wire Rod			
Section Size(mm):	Round(Ø)	5.5 ÷ 16	Weight of Coils(Kg):	Up to 2350
Productive Grades:	Q195, Q235, ASTM(A1006-A1008-A1010), GS-20Mn5, 30MnSiV, 42CrMo4, 54SiCr6, RSt34, SG2, SG3, SWRY11, SAE10B(21-35-38), SWRH(42-52-62-67-72-82)B, 100Cr6			
Delivery Conditions:	As rolled Spheroidized Sub-critical annealed			

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Steel Grades:

Material Type	Typical Grades being serviced
Plain Carbon Steel	3sp, 5sp, Q195, Q235, ASTM A1006, ASTM A1008, ASTM A1010, SWRH(42B, 52B, 62B, 67B, 72B,82B)
Alloy Structural Steel	CK10, CK15, CK45, GS-20Mn5, 30MnSiV, 25CrMo5, 42CrMo4, 20MnCr5, 38MnB5, 38MnVS6, 30CrNiMo8
Bearing Steel	100Cr6, 100CrMo7
Spring Steel	CK55, CK60, CK75, 55Cr3, 51CrV4, 52CrMoV4, 54SiCr6, 60SiCr7, 38Si7
Case Hardening Steel	18CrNi8, 34CrNiMo6, 18CrNiMo7-6, 27MnCrB5-2, 16MnCr5
Cold Heading Steel	33B2, 30MnB4, 31CrMoB2-1, C10C, C15C, C20C, SAE 10B21, SAE 10B35, SAE 10B38
Oil & Gas Steel	X52, L80, P110,C110,N95
Electrode Steel	RSt34, SG2, SG3, SWRY11

Quality & Tolerances Capability for Supplies:

Different sections and steel grades would be produced according to the qualitative requirements of technical conditions based on standard specifications and explicit customers wishes.

- All the scraps and incoming materials are checked with the radioactive sensor to be under the specified limit (max. 100 Bq/Kg).
- Size tolerances will meet the requirements of ½ EN 10017, ½ EN 10058, ½ EN 10059, ½ DIN 1013, ½ EN 10060, and ½ EN 10084.
- Ends of bars are abrasively cut without burr and without deformation of the ends of bars.
- Surface quality would be controlled to satisfy the requirements for forging and upsetting (max. 0,3 mm) or for further machining (EN 10221, class B)
- Ultrasonic testing for the bars would be conducted based on EN 10308, Type 1a, quality class 3 in order to be sure about the defects. Electromagnetic testing would be also used for surface defect detections.
- Residual magnetism is checked by sampling to be under the specified limit (15 A/cm or 8 A/cm).
- Anti-mixing testing is checked by a spectrograph.
- Bundling, marking, and tagging would be done in an appropriate and satisfactory way.

In addition, we have a central laboratory equipped with various instruments, including quantometer, mechanical testing machines (Tensile testing machines, 5 tones and 120 tones capacity, and Impact testing machine, with temperature conditioning from -80°C to +25°C), hardness tester, Jominy testing machine, metallography equipment, and optical microscopy. Hence, the following items can be conducted rigorously:

- Chemical analysis is checked with an appropriate resolution according to the ASTM E415 and mentioned in the certificate. The below limits are guaranteed:
  O2: max. 15 ppm (max. 20 ppm)
  N2: 0.005-0.05%
  H2: max. 2 ppm
  S: max. 0.035%. Below 0.01% is also achievable.
  Cu: max. 0.3% (max. 0.25%)
  Cr+Ni+Mo: max. 0.63%
  Cu+10Sn: max.0.50%
  Al/N: 2.3-3.0
- Hardenability will be tested on Jominy values according to the ISO 642.
- Hardness is tested in Brinell values and mentioned in the certificate.
- Tensile test is done according to the ISO 6892-1 and ISO 6892-2 standard. Tensile results including tensile strength (Rm), upper yield strength (ReH), lower yield strength (ReL), offset proof strength (Rp0,2), elongation percentage (A), reduction in area percentage (Z), and any other requested parameters would be presented. Impact tests would be conducted in CHARPY and IZOD methods according to ISO 148-1 & ASTM E23 at different temperatures. All the individual and average results would be presented in the certificate.

- Grain sizes are calculated and reported according to the ISO 643/ASTM E-112. Etching is done according to the ASTM E318/ASTM E340. Microscopic and macroscopic figures can be embedded for specific structures in the certificate.

- Sulfur print would be presented according to the ISO 4968/ASTM E1180.
- Decarburization would be checked based on the ASTM E1077/ JIS-G 0558.
- Cleanness is checked according to the DIN 50602 (method K), ASTM E45, ISO 4967, and JIS-G0555 and will be reported in the certificate.
- Radioactivity and lack of mercury, cadmium and lead are checked in the products and reported in the certificate.
- Certification is issued according to the EN 10204, including all standard specifications related to the material and testing methods. Also, both the results and set values are reported in the certificate.
- All testing devices are calibrated annually by an independent calibration institute who is ISO 17025 certified.
- It is worth noting that quality management is independent from production in PASCO.