

The Market Leader of Alloy & Special Steels in Pakistan



### Pakistan National Accreditation Council

Ministry of Science & Technology Government of Pakistan Islamabad

### Certificate of Accreditation

is awarded to

QAD Laboratory, Peoples Steel Mills Limited, Javedan Nagar, Manghopir,

Karachi, Pakistan

in accordance with the requirements of ISO/IEC 17025:2005
The accreditation is subject to regular surveillance and compliance to the requirements of PNAC
For scope of accreditation, see Appendix

Accreditation Certificate Number: LAB 059

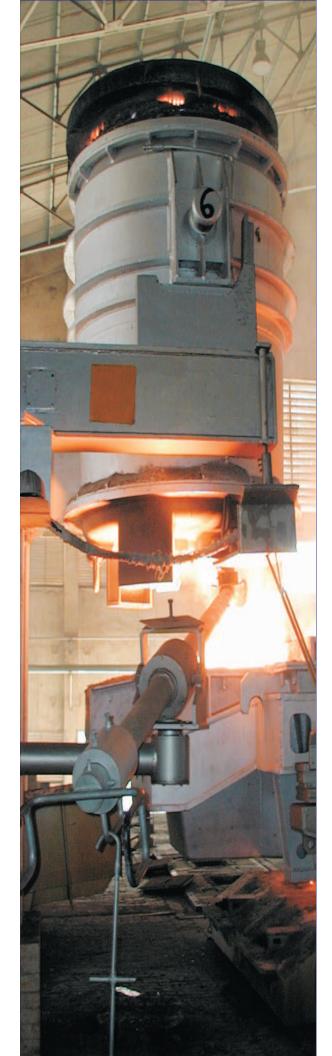
Valid until 27-03-2022

PNAC









The Market Leader of Alloy & Special Steels in Pakistan

### **COMPANY PROFILE**

Peoples Steel Mills Ltd., a world class alloy and special steel manufacturing plant located in Manghopir Karachi. The plant is spread over an area of 239.11 acres & was set-up by the Government of Pakistan in 1975 with Japanese assistance.

In order to keep pace with emerging technologies, the plant was upgraded in 1996 through a comprehensive balancing & modernization programme with the technical assistance of VAIS, INTECO and Bohler of Austria. The plant is now equipped with modern melting, refining, degassing, electro slag re-melting, necessary casting, rolling and forging facilities with an annual capacity of 75,000/MT. Product quality is assured by highly qualified well trained staff with modern material testing facilities and enforcing quality management system.

The plant has the capability to produce steels according to all major international quality standards and to date more than 350 steel grades have been manufactured.

Peoples Steel enjoys the highest market share in the alloy and special steel market of Pakistan. A diversified base of more than 490 customers includes high profile illustrious end users in automotive, defense, agricultural machinery, transportation and engineering sectors in Pakistan. Besides direct export of alloy and tool steels, components manufactured from our steels are also supplied by our customers to renowned European automobile manufacturers.

In addition to manufacturing/ supply of quality materials, Peoples Steel also extends expertise in the following fields:

- Manufacturing of Seamless Tubes & Pipes
- Material Testing & Analyzing Chemical, Mechanical, NDT, Metallography & Failure Analysis.
- Refractory manufacturing & testing.

The Market Leader of Alloy & Special Steels in Pakistan

### **QUALITY POLICY**

Peoples Steel Mills Ltd. is committed to the achievement of customer requirements and expectations and to continuous improvement in productivity, quality, service, technology and costs.

The commitment to quality is demonstrated by:

- The achievement of quality assurance standard, such as ISO 9001:2015 and unwavering focus on customer.
- Providing commitment and leadership.
- The development of knowledgeable and motivated work force with a positive commitment to professional excellence.
- The setting of SMART objectives whereby continuous improvement in performance against agreed goals.
- The development of new and improved products designed to meet customer requirements and expectations.
- The emphasis on prevention rather than detection in the drive towards Total Quality Management.
- Identify risks and opportunities to the quality management system.



### **STEEL TYPES**

The steel types manufactured by us are broadly classified as:

- Cutting/ High Speed Tool Steels
- Free / Semi-Free Cutting Steels
- Case Hardening Steels
- Spring Steels
- Ball Bearing Steels
- Heat Resisting Steels

- Cold Work Tool & Die Steels
- Hot Work Tool & Die Steels
- Stainless/ Surgical Steels
- Armour Steels
- Plastic Mould Steels
- Steels for Special Applications

# ABILITY TO PRODUCE ACCORDING TO ALL MAJOR INTERNATIONAL QUALITY STANDARDS, GRADES & CUSTOMIZED SPECIFICATIONS

Always ensuring the right quality, Peoples Steel has the ability to produce steel according to all major international standards and grades. So far we have produced more than 350 steel grades according to:

<ul> <li>American</li> </ul>	ASTM, AISI, SAE American					
<ul><li>British</li></ul>	BS					
• Chinese	GB, YB					
• European	EN					
• French	AFNOR					
• German	DIN					
• Italian	UNI					
<ul> <li>International</li> </ul>	OZI					
<ul> <li>Japanese</li> </ul>	ZIL					
<ul><li>Russian</li></ul>	GOST and several others					

We can also manufacture steel according to customized specifications.



The Market Leader of Alloy & Special Steels in Pakistan

### **PROCESSES DESIGNED** TO PRODUCE CLEAN STEELS

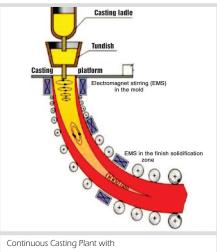
"Clean" and Vacuum Degassed Steels

Non-metallic inclusions and gases entrapped in steel can lead to internal defects resulting in poor quality products. In addition to product consistency and performance, fatique strength and tool / die life is strongly correlated with cleanliness and gas contents in steels.

Peoples Steel employs state-of-the-art melting and refining techniques to manufacture steels with low levels of non-metallic inclusions, residual elements and well controlled gas contents.



Vacuum Oxygen Decarburization (VOD)



Electro-Magnetic stirrer



(A) Sulfides (B) Alumina (C) Silicates (D) Oxides Inclusions Confirming to ASTM E-45 Method **Inclusions Not-Confirming** to ASTM E-45 Method

## A RELIABLE SOURCE OF STEEL FOR WORLD CLASS AUTOMOBILE MANUFACTURERS

Peoples Steel's material meets the demanding and stringent quality requirements of world class automobile manufacturers. Components manufactured from our steels are used by leading OEMs in Pakistan for their prestigious brands.

Honda - Atlas

Nissan

MASSEY FERGUSON (Millat)

Toyota

Yamaha

FIAT (Al-Ghazi)

Suzuki

- Daewoo
- Hino

Components manufactured from Peoples Steel material are also supplied through vendors to renowned international automobile brands of USA & Europe.

# EXCELLENT PRODUCTION PLANNING AND SUPPLY CHAIN MANAGEMENT GUARANTEES ON TIME DELIVERIES

Peoples Steel is serving more than 250 customers across the Pakistan.

Being the 1st choice supplier of alloy and special steels, an intelligent production planning and supply chain management system is placed to ensure the deliveries to our customers irrespective of their order volumes, on time - every time.

Stocks of fast moving products are maintained to facilitate production schedules of prestigious brands through just in time supplies.





The Market Leader of Alloy & Special Steels in Pakistan

### **DIVISION-I: MELTING AND DOWNSTREAMING FACILITIES**

#### **Melting & Refining**

Melting is done in two 15MT capacity Electric Arc Furnaces (EAF) and refining is carried out in Ladle Furnaces (LF) with Vacuum Degassing (VD)/ Vacuum Oxygen Decarburization (VOD) to control gas contents.

#### **Continuous Casting**

The (2+1) strand Continuous Caster specifically designed for alloy steels is equipped with soft secondary cooling, two stage magnetic stirrer and other special features for the production of 110 to 230 mm square/ round billets and blooms.

#### **Ingot Casting**

Highly refined ingots in rectangular, round, octagonal and square sections are produced by bottom pouring technique. Ingot sizes vary from 500Kg to 14,000Kg depending on steel grade and initial stock size requirements. Ingots can be slow cooled, stress relieved or annealed.

### **Bar Rolling**

The mill is producing rounds from 18mm to 80mm and flats with width 50mm to 110mm & thickness from 6mm to 25mm. The shop is also equipped with auto-controlled pusher type reheating furnace and roll cutting/grinding facilities.

### **Blooming & Slabbing**

Plates with width up to 1500 mm and thickness down to 8 mm are rolled from flat ingots. Round and square sections ranging from 75mm to 200mm are produced from cast and

forged blooms. The Blooming Mill is also equipped with auto-controlled re-heating furnace and roll cutting/grinding facilities.

### **Press Forging**

The 1700MT hydraulic press equipped with reheating furnace and auto-manipulator is used for the processing of heavy forging/ critical parts up to 12MT.



PRESS FORGING



ELECTRIC ARC FURNACE (EAF)



▲ COUNTINUOUS CASTING



▲ BAR ROLLING



LADLE FURNACE (LF)



INGOT CASTING



BLOOMING & SLABBING

### **Hammer Forging**

Forging facilities comprises of half to three tones hammers & mechanical presses, equipped with re-heating and heat treatment furnaces. Components up to 15Kg weight can be produced through die forging.

### **Radial Forging**

Radial forging is the state-of-the-art technique to manufacture profiles up to 200mm. The facility is equipped with reheating and annealing furnaces and auto manipulators.

#### **Cold Drawing, Peeling and Polishing**

Round bars are drawn and peeled to exhibit a bright and/or polished surface, with increased mechanical properties, improved machining characteristics and precise and/or uniform dimensional tolerances up to h-9 quality standard. The mill range for cold drawing is 10mm to 65mm, for peeling is 20mm to 100mm and for ground and polished bars is in the range of 20mm to 78mm.

#### **Heat Treatment**

Heat treatment plays a vital role to induce certain desired properties by altering the internal structure of steel. We have expertise in all significant heat treatment processes like:

- Annealing
- Normalizing
- Stress Relieving
- Precipitation Hardening
- Aging
- Solution Treatment
- Spherodizing
- Hardening & Tempering
- Post-Weld Treatment

State-of-the-art automated heat treatment furnaces for lab scale samples to 30 tons charge are available.



▲ HAMMER FORGING



A RADIAL FORGING



A PEELING MACHINE



▲ HEAT TREATMENT



E-mail: marketing@psmltd.com Website: www.psmltd.com

The Market Leader of Alloy & Special Steels in Pakistan

### A FEW REPRESENTATIVE STEEL GRADES PRODUCED BY PSM AND THEIR APPLICATIONS

PSM has so far produced more than 350 steel grades of International Standards and have capability to produce other grades with customized specification as well.

SR	STEEL TYPES	STEEL GRADES -		CHEMICAL COMPOSITION (Wt %)									NEAREST GERMAN	
NO.			С	Si	Mn	P	S	Cr	Mo	Ni	Cu	Others	(BöHLER) GRADES	TYPICAL APPLICATIONS
110.			0.43	0.15	0.60	max.	max.				max.			
1	_	AISI 1045	0.50	0.35	0.90	0.030	0.050				0.35		1.1191	Parts of general engineering automobiles, vehicles, axles, coupling parts & shafts spindle etc.
2		AISI 1141	0.37	0.15	1.35	max.	0.08						1.0726	Generator Shafts, worm gears, wheel puller bolts where parts must resist wear and also be tough with good
	Carbon Steels		0.45	0.30	1.65	0.040	0.13						1.0726	machinability.
3		ASTM A706	max.	max.	max.	max.	max.						1.057	Deformed and plain bars for concrete reinforcement, specially for construction of high rise earthquake resistance
			0.30	0.50	1.50	0.035	0.045						11001	structures.
4		SCM-415	0.13	0.15	0.60	max.	max.	0.90	0.15	max.	max.		1.7262	Parts requiring toughness & core strength e.g. gears, shafts for automotive & general mechanical engineering.
			0.18	0.35	0.85	0.030	0.030	1.20	0.30	0.25	0.30		1.7202	
5	Case Hardening	20MnCr5	0.17	0.15	1.10	max.	max.	1.00					1,7147	Average size and whools, arbors & goars for vahisles ato
	Steels		0.22	0.40	1.40	0.035	0.035	1.30					1.7147	Average size cog wheels, arbors & gears for vehicles etc.
6		AISI 8620	0.18	0.15	0.70	max.	max.	0.40	0.15	0.40	max.		1.6523	Parts of large cross section requiring toughness and core strength e.g. gears, crank shafts, shafts for aircraft,truck
			0.23	0.35	0.90	0.035	0.040	0.60	0.25	0.70	0.35		(E 116)	and for general mechanical engineering.
7		AISI 5135	0.33	0.15	0.60	max.	max.	0.80			max.	1.7034 (V 500)		Highly stressed components of automobiles, vehicles and general mechanical engineering.
			0.38	0.35	0.80	0.035	0.040	1.05			0.35		(V 500)	
8	Heat Treatable	AISI 4140	0.38	0.15	0.75	max.	max.	0.80	0.15	max.	max.		1.7225	Automotive connecting rods, crankshafts, knuckles, rear axle and trailer axle shafts, oil industry, bits, core
	Steels		0.43	0.35	1.00	0.030	0.040	1.10	0.25	0.25	0.35			drills,reamer bodies, drill collars, tool joints, piston rods, aircraft, shapes, tubing and pump parts.
9		AISI 4340	0.38	0.15	o.so	max.	max.	0.70	0.20	1.65	max.		1.6565	Highly stressed components of large cross section e.g. aircraft, automotive & machines propeller/ gear/crank sha
			0.43	0.35	0.80	0.030	0.040	0.90	0.30	2.00	0.35		(V 121)	connecting rous a fairtuing gear components etc.
10	Armour Steel	PSM 3	0.27	0.20	0.30	max.	max.	0.70	0.30	2.80			1.6659	Armour plates for tanks, military vehicles and bullet proof applications.
			0.33	0.40	0.60	0.020	0.015	1.10 0.65	0.50	3.50			(V 121)	
11	Spring Steels	SUP-9 S (JIS-G 4801)	0.60	0.15	0.65	max. 0.035	max. 0.035	0.65			max. 0.30		1.7176	eaf springs for automobiles/ heavy duty vehicles/ railways. Torsion bars & Coil springs.
12	Bearing Steel	(313-G 4601) AISI	0.98	0.35	0.95	max.	max.	1.30	max.	max.	max.		1.3505	
		E 52100	1.10	0.15	0.45	0.025	0.025	1.60	0.06	0.25	0.35		(R 100)	Ball and roller bearing parts e.g. balls, rollers, needles, cones, rings and discs upto 30mm finishing thickne service temperature upto 200°C.
		L 02100	max.	max.	max.	max.	max.	18.00		8.00	max.		1.4306	
13	Austenitic Stainless Steels	AISI 304L	0.030	0.75	2.00	0.045	0.030	20.00		12.00	0.35	N: 0.05-0.080	(A 604)	Chemical industry, pharmaceutical industry and nuclear engineering.
		AISI 316L	max.	max.	max,	max.	max.	16.00	2.00	10.00		N: ≤ 0.10	1.4404	Dyeing, sulphite, pulp, wood, dairy equipment, chemical & rayon industries.
14			0.030	0.75	2.00	0.045	0.030	18.00	3.00	14.00			(A 100)	
			max.	max.	max.	max.	max.	17.00		9.00		Ti≥-5x(C+N)≤	( )	Aircraft ownquet stacks and manifolds, procesure vessels, large mulfflors for stationary diseast engines, expansion
15	Hart Barriet	AISI 321						19.00				0.70	1.4541	
	Heat Resistant Stainless Steels		0.08	1.00	2.00	0.045	0.030			12.00		N ≤ 0.10	4 4045	
16		AISI 310S	0.08	max. 1.50	max. 2.00	max. 0.045	max. 0.030	24.00		19.00 22.00			1.4845 (H 532)	Heat treatment furnace parts, grate, fitting, door, fan, super heated suspension, valves, spindles, bolts, nuts, rivets and tubular components in petroleum industry.
			0.08	max	max,	max.	max	12.00		max,			1.4028	,
17		SUS 420J2	0.40	1.00	1.00	0.040	0.030	14.00		0.60			(N 540)	Cutlery, knives, sword and valve parts, etc.
	Martensitic Stainless Steels		0.40	max.	max.	max.	max.	16.00	max.				1.4125	Cutting tools requiring superior corrosion resistance, detergent resistant cutlery and for wear resistant components.
18		AISI 440C	1.20	1.00	1.00	0.040	0.030	18.00	0.75				(N 695)	
			1.40	0.30	0.30	max.	max.	11.00	0.70			V ≤ 0,80	1.2379	
19		AISI D2	1.60	0.50	0.50	0.030	0.025	13.00	1.20			Co s 0.60	(K 110)	Excellent toughness and suitable for bath nitriding. High-performance cutting dies and punches, shear blades for cutting, thread rolling dies, deep drawing, measuring tools, plastic molding, extrusion and pressing tools etc.
	Tool Steels	AISI P20	0.28	0.20	0.60	max.	max.	1.40	0.30					
20			0.40	0.80	1.00	0.030	0.030	2.00	0.55				1.2330	Plastic moulds, backers, bolsters & die holders. Also suitable for applications like rails, shafts and wear strips.
21		AISI H13	0.30	0.80	0.20	max.	max.	4.75	1.25			<u>-</u>	1.2344	Heavy duty hot work dies, mandrels and tubes for hot extrusion. Die casting equipment, hot shear blades and plastic moldling dies.
			0.40	1.20	0.40	0.025	0.025	5.50	1.75				(W 302)	
22	-	AISI T4	0.70	0.20	0.20	max.	max.	3.75	0.70			V: 0.80 - 1.20 W:17.25 - 18.75	(1.002)	
													1.3255	Lathe and plaining tools with eminent cutting strength and toughness.
			0.80	0.40	0.40	0.030	0.030	4.50	1.00			Co: 4.25 - 5.75		

Note: Elements given in ( ) are optional.

E-mail: marketing@psmltd.com Website: www.psmltd.com 9

The Market Leader of Alloy & Special Steels in Pakistan

### **DIVISION-II: RE-MELTING DIVISION**

### **VIM Plant (Vacuum Induction Melting)**

A Vacuum Induction Melting (VIM) plant with bottom and top ingot pouring techniques is producing electrodes up to 8 Mton. Re-melting and casting under vacuum makes possible the effective degassing of the melt and precise adjustment of alloy composition thereby producing an end product that is clean and homogeneous. The process has some distinct advantages like:

- High yield of expensive elements (Ni, Cr, etc.)
- Vacuum allows controlled addition of highly reactive elements
- Close tolerances achievable for various alloying elements-especially for reactive elements such as AI, Ti, Nb, Ta, B and Zr
- Very low Hydrogen, Oxygen and Nitrogen gas contents possible
- Removal of undesired trace elements (Pb, Cu, Se, Te, Bi)



▲ VIM PLANT

### **VAR Plant (Vacuum Arc Re-melting)**

A secondary refining, VAR unit having 5 Mton capacity is used to improve the cleanliness and refine the structure of standard air-melted or vacuum induction melted ingots/ electrodes through continuous re-melting by means of an arc under vacuum.

The process produces special steels & super alloys required in high integrity applications where cleanliness, homogeneity, improved fatigue and fracture toughness of the final product are indispensable like nuclear and aerospace applications. The advantages of VAR process may be summarized as follows:

- No slag
- Inert heat source (electric arc)
- Inert atmosphere and mould controlled solidification
- Low gas content (H, N, O)





- Good macro cleanliness
- Superior micro cleanliness
- Less segregation

The Market Leader of Alloy & Special Steels in Pakistan

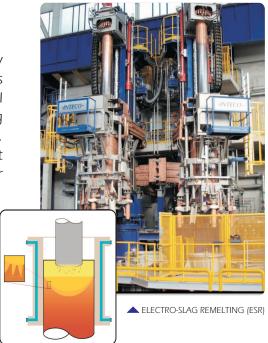
### **Electro-Slag Re-Melting (ESR)**

A new Electro-Slag Re-Melting (ESR) plant with 35MT facility has been added in to the system. The technique involves re-melting of consumable electrodes in which liquid metal droplets are refined with contact of a molten slag providing a cleaner, more uniform alloy with minimum segregation. The resulting final metal product is used in the most demanding aerospace as well as a vast array of other applications.

The new advancements in Peoples Steel's manufacturing facilities enabled us to offer products like:

- Nickel based super alloys for high temperature applications
- Cobalt based alloys for medical applications
- Super alloys for aviation & aerospace industry
- Stainless steels for aggressive environments
- Tool Steels
- Ball Bearing Steels
- High purity and very clean Copper alloys
- Magnetic alloys for high permeability etc.



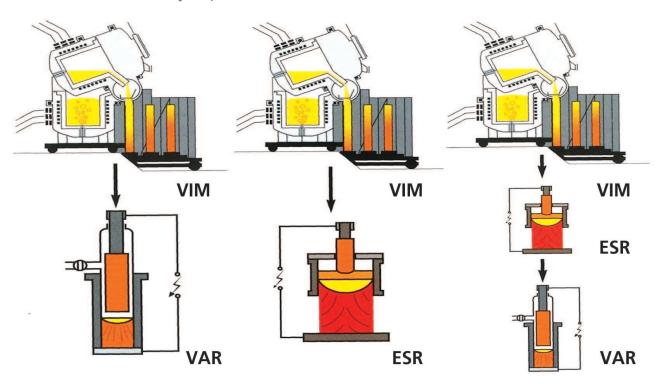




▲ 35 MT ESR INGOT



The Market Leader of Alloy & Special Steels in Pakistan



### **SOME REPRESENTATIVE APPLICATIONS/ GRADES**

A-286, C450, Alloy 80A, Alloy 91, Alloy 901, Alloy 101, Alloy 520, Inconel 600, Inconel 625 etc

**Power Generation** 

P-20, P-6, AISI-4140, W-100, 1.2060, 1.2735, 1.2038, 1.2316, K-107, K-105, K-110, H-13, H-10, W-500, T-1, T-4, T-15 etc

**Tool Steels** 

AISI-321, AISI-316L, AISI-431, DIN 1.4057 etc. R100, 15CDV6, 35NCD16, D406A, 30CrMnSiA etc

**Protective Environment Steels** 

**Aerospace Applications** 

The Market Leader of Alloy & Special Steels in Pakistan

## QUALITY ASSURANCE: MATERIAL TESTING, INSPECTION & FAILURE ANALYSIS

To meet the stringent quality requirements and adherence to the international quality standards Peoples Steel has strong quality assurance system and employs state-of-the-art material testing and analyzing facilities which includes:

- Chemical Analysis
- Material Identification
- Mechanical Testing
- Non-Destructive Testing (NDT)
- Metallography
- Failure Analysis
- Corrosion Testing
- Scanning Electron Microscopy (SEM)

In addition to in-house use, Peoples Steel also extends the Material Testing, Inspection, Failure Analysis and third party inspection facilities to industries such as petro-chemicals, fertilizer, engineering & railway etc.



▲ TENSILE TESTING MACHINE



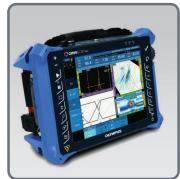
▲ XRF



▲ SPECTROMETER



▲ OPTICAL MICROSCOPE



▲ TOFD



SCANNING ELECTRON MICROSCOPE

### REFRACTORY MANUFACTURING AND SERVICES

Peoples Steel is also producing high temperature refractory products. Our refractory division is engaged in production of High Alumina Bricks, Castables, Mortar, Calcined Bauxites etc. The refractory Mill is equipped with rotary kiln, screw friction press, ball mill, crushers of various types, mixture and gas fired furnaces along with following testing facilities;

- Cold Crushing Strength (CCS)
- Refractoriness under load (RUL)
- Quantitative XRF

- Bulk Density
- Apparent Porosity
- Wet Chemistry



ROTARY KILN



▲ FRICTION PRESS



▲ REFRACTORINESS UNDER LOAD



▲ APPARENT POROSITY MACHINE



The Market Leader of Alloy & Special Steels in Pakistan

### **SEAMLESS PIPE MANUFACTURING**

To meet the diversified requirements of Oil and Gas, Process Industry, General Engineering, Automotive, Defence etc., Seamless Pipe Mill has been setup for the production of carbon/ alloy/ special steel seamless pipes and tubes as per international standards.

The Plant is equipped with state of the art facilities to produce hot rolled, cold drawn and cold rolled pipes / tubes, in the size range OD: 16mm - 220mm, wall thickness 1mm - 30mm and lenght upto 40ft.



Rotary Hearth Furnace



PIERCER



▲ HOT EXTRUSION



READY TO SHIP



E-mail: marketing@psmltd.com Website: www.psmltd.com

The Market Leader of Alloy & Special Steels in Pakistan

### **PRODUCTS**

### **ESR** Ingot

Diameter: 400, 600, 800, 1000, 1250 mm

Length: 3.6 meters (max.)
Weight: 35 mt (max.)

#### **Concast Billet**

Square : 110, 125, 150, 230 mm

Round : 110 mm Length : 4 - 6 meters

#### **Round Bars**

Diameter: 18, 20, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 43, 45, 48, 50, 53, 55, 57, 60, 63, 65, 68, 70, 75, 80, 90, 110, 120, 130mm

Length: 4 - 6 meters

#### **Flat Bars**

Thickness: 6 - 25 mm

Width: 50 - 110 mm

Length: 4 - 6 meters

#### **Cold Drawn Bars**

Diameter: 10 - 65 mm Length: 4 - 6 meters

#### Sheets

Thickness: 3 - 8mm
Width: Up to 950mm
Length: Up to 3000 mm

### **Press Forging**

Shafts : Dia 500 mm (max.)
Disc : Dia 1500 mm (max.)
Length : 8 meters (max.)
Weight : 12 mt (max.)

### **Forged Rings**

Outer Diameter: 500 - 2200 mm Inner Diameter: 300 - 1950 mm Thickness: 125 - 950 mm Height: 100 - 350 mm Weight: 2.2 mt (max.)

### **VIM/ VAR Ingot**

VAR Diameter: 650mm (max)
VAR weight: 5 mt (max.)
VIM weight: 8 mt (max.)

#### **Rolled Billet**

Square : 75, 90, 100, 120, 160 mm

Length: 4 - 6 meters







#### Peeled, Ground and Polished Bars

Diameter : 20 - 80 mm Length : 3 - 6 meters

#### Plates

Thickness: 8 - 50mm

Width: Up to 1500 mm

Length: 6 - 12 meters (Depending

upon thickness & width)

#### **Hammer Forging**

Close Die : Up to 15 kg Free Forging: Up to 1500 kg

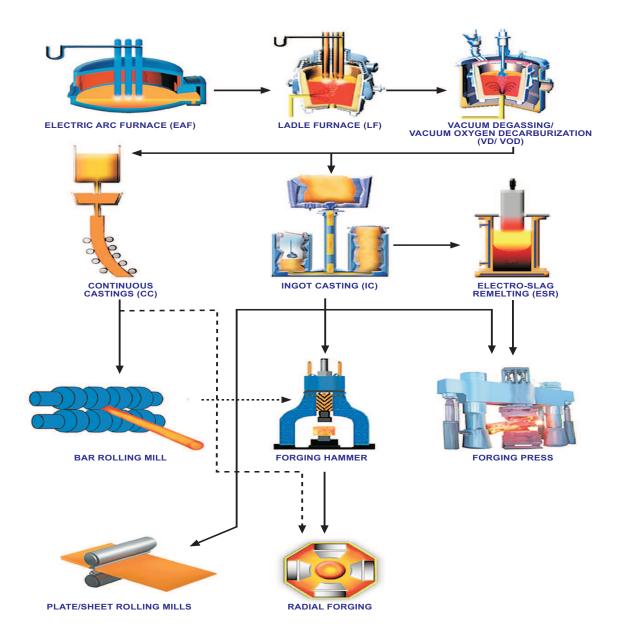
### **Radial Forging**

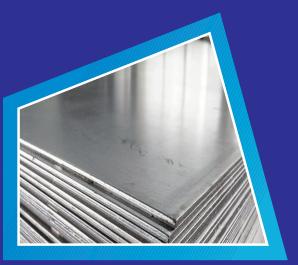
Size : Square, Round & Varying Section

Profile/ Axle of cross section 60-200 mm and Flat of thickness 30 - 150 mm & width 60 - 180 mm

Length: 4 - 6 meters

### **PROCESS FLOW DIAGRAM**













Javedan Nagar, Manghopir, Karachi-75890, Pakistan.
PABX: (92-21) 36770126-28, Fax: (92-21) 36770112,
Marketing: (92-21) 36770116-18, 36770130-32
E-mail: marketing@psmltd.com, Website: www.psmltd.com