# PISTON BARS PUMP SHAFT QUALITY (PSQ)



Piston & Pump Shaft Bars is one of Aamor Inox's premium product lines. These super finished precision bars are processed using the ultra-modern combined lines and state of the art equipment.

100% Ultrasonic Inspection and Eddy Current Testing ensures that the bars are free from any internal defects. The bars are then finished using the specially designed finishing machines, which ensures that the size tolerances (including the out of roundness) and surface roughness are achieved as desired.

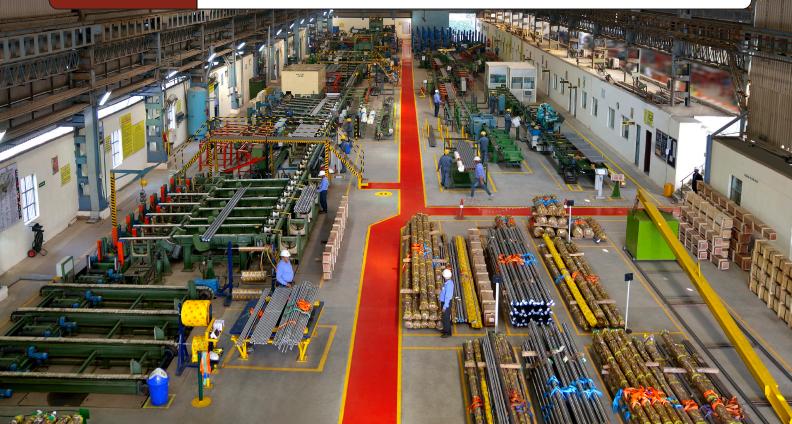
# PUMP SHAFTS HYDRAULIC & PNEUMATIC PISTON SHAFTS

## CYLINDER SHAFTS BOAT SHAFTS CHROME PLATING QUALITY BARS

VALVE SHAFTS

**BEARING SIZED BARS** 

Size range	6 mm – 100 mm (1/4 – 4 inch)
Size Tolerances	e6, j6, h6, f6, f7, h7, f8, h8, h9, ½ of ASTM A484 etc or as per the customer's requirement.
Length	2 meters – 7.5 meters (8 feet to 24 feet)
Ovality	Half of diameter tolerance
Straightness	0.25mm per meter max (0.0015" per feet)
Surface Finish	Ra - 0.2 um / 12 RMS max
Chamfering	Available in 30, 45 and 60 degree thru fully automatic both-end chamfering machine
Crack Test	Eddy Current Testing thru Circograph (from Dr. Foerster, Germany) and Magnetic Particle Inspection (MPI)
Ultrasonic Test	100% tested thru Digital Ultrasonic Flaw Detector, as per ASTM A-388, EN 10308 (class 1 to 4), API 6A/ISO 10423:2003-PSL 3, SEP 1920:1984 (class A, B, C), MIL STD 2154
Length Tolerance	Available in special cut to length bars in tolerance – 0/+10mm (-0 +0.5 inch)
Packaging	<ul> <li>Aamor Inox has special boxing for PSQ material to ensure the protection of the finish and straightness of material during transportation and handling.</li> <li>In wooden boxes (complying ISPM – 15 standards) 500 – 1000 Kgs. (1000-2000 Lbs.) with lifting belts. Wrapped with rust preventive paper for selected grades. Bars are collared to protect finish.</li> <li>In Cardboard Tubes</li> </ul>



#### **MOST ADVANCED HEAT TREATMENT FACILITY IN INDIA**

- Fully-automatic, German-made Furnaces
- Temperature uniformity of +/- 3 Degree Celsius.
- Quench delay 40 seconds (both for Water & Oil)
- Conforming to NORSOK, API-6A, AMS 2750-E

#### **HEAT TREATMENTS CAPABILITIES FOR BARS UPTO 8.5 METERS LENGTH**

- Annealing & Solution Annealing
- Spheroidizing Annealing
- QT Oil Quenching & Tempering
- HT Hardening & Tempering (condition T)
- Tempering / Double Tempering / Double Ageing

#### STATE-OF-THE-ART BRIGHT BAR MANUFACTURING FACILITIES

- · With highest level of Automation in Industry
- Equipped with Laser size measurement system from Zumbach, Switzerland
- High-precision cutter heads for Consistent Size, Ovality, Roundness and lobing in the peeled bars.
- Schleipo Centreless Grinding Machine (from Schumag AG)
- · Dedicated to Quality and Precision

### HIGH PRECISION CLOSE TOLERANCE GROUND & POLISHED SHAFTS

#### 17-4PH (1.4542) PUMP SHAFT QUALITY (PSQ) BARS

Heat treatment conditions: H1150-D, H-1150, H1075, H1025, H900, Annealed condition, P1070, P960, P930, P800 etc. Conforming to ASTM-A564, AMS-5643R, AMS-5622 and NACE specifications.



- 1.4021, 1.4404, 1.4104, 1.4057, 1.4305, 1,4307, 1.4571, 1.4541, 1.4006, 1.4005, 1.4542, 1.4462, 1.4122, 1.4435
- 416, 316L, 17-4ph, 420, 410, 430F, 431, 303, Duplex F51 etc.

# **CERTIFICATES & APPROVALS**

- ISO 9001:2015
- ISO 14001:2004
- OHSAS 18001:2007
- AS 9100-D (Aerospace)
- AD 2000-Merkblatt W0, W2 & W10
- P.E.D 2014/68/EU
- Norsok M-650 (Oil & Gas Industry)
- ISO/TS 16949 (Automotive Industry)
- C.E. Marking (CPR Regulation (EU)
- Marine & Offshore Certificate

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