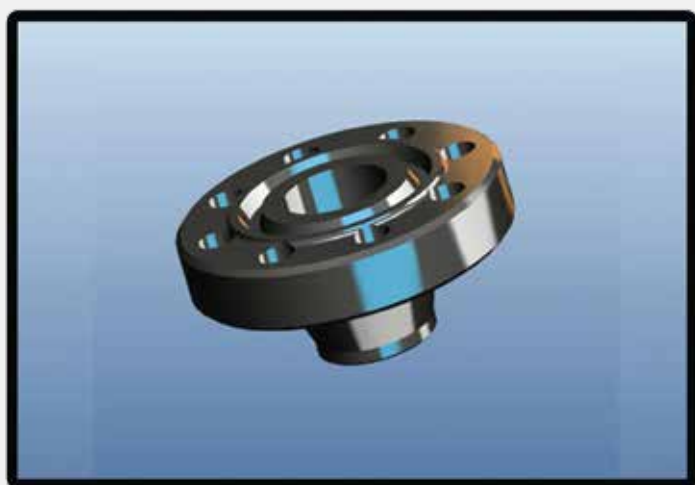


FORGING QUALITY INGOTS



**SUN FLAG
STEEL**

BIS Approved
NABL Accredited Chem & Mech Labs.
ISO 9001 & IATF 16949 Certified by UL DQS
ISO 14001 & OHSAS 18001 Certified by TUV Nord
AD 2000 Merkblatt WO /PED Certified by TUV Nord

Grades

- Regularly Carbon, Cr, Cr-MO & Cr-Ni-Mo grades, as per popular Standards like AISI, BS, EN, DIN, GOST, JIS, etc.
- Also against specific TDCs of Customers.

Stainless Steel Grades

- AISI 410, 420 - Majority for export market (indirect).
- X22, X20, X5, X18, X19 - Energy (Turbine Blades)
- AISI 304, 316, 304L - Defence, Aerospace

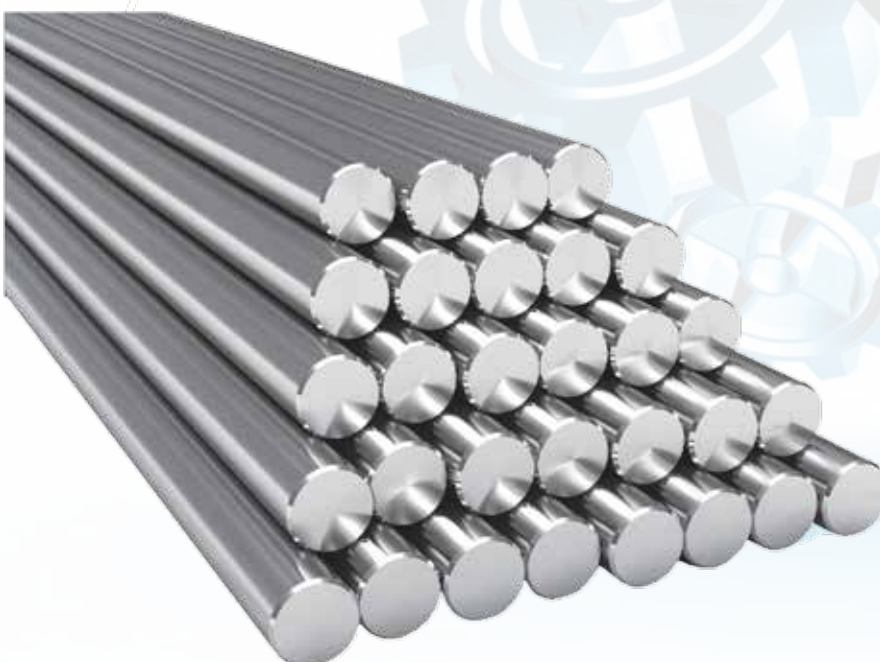
Other value added Steel Grades

- En36C, En39B, AMS 6418 - Mining / Boring Tools
- En52, 21-4N, SUH 11 - Valve stems
- Din 1.2174, H11, H13 - Die Blocks
- En41B - Screw / Barrels for Injection Moulding M/c.

Rolling Capability

Rolled Products from Ingots	
Straight Length Rounds	
Single Rolling	200 mm to 250 mm Dia.
Double Rolling	50mm to 180 mm Dia.
Round Cornered Squares	
Single Rolling	160 to 340 RCS
Double Rolling	50 to 150 RCS

- Slow cooling pits are available for control cooling of rolled product.
- Sufficient Top (8%) & bottom (2%) discards are given on rolled bars.
- We guarantee a Minimum Reduction ratio of 6:1 for Round products.



Salient Features of Ingots

With modern facilities already existing for refining degassing and continuous casting of steel, SUNFLAG considered it is important to widen the product mix and cater to the needs of specific application segments where ingots are preferred over continuously cast blooms. Accordingly the facilities required for casting of wide end up bottom poured ingots are now installed. Our Facility is capable of producing Steel for Defence, Railways, Tool and Die Steel and forging quality ingots meeting specifications.

Ingot Dimension - Phase 1

Ingots	Ingot Size (mm)	Ingot Weight, MT
SF-1	637X480	4.2
SF-2	500X402	2.7
SF-3	412X323	1.8

Height of all Ingots is 1700 mm.
Heat Size will be about 55 MT.



Unique advantages of Sunflag Ingots

- Homogenized Chemistry within narrow ranges, and VD/AOD treated LM for Ingot Casting.
- Mold powder bags hung in ingots for better surface finish of ingots, about 1.5Kg of powder per ton of LM.
- Argon flushing of trumpet before cast start.
- Argon shrouding of metal flow from Ladle to Trupmpet.
- Bricks & Hot Tops preheated for 24 hrs at 200°C before use.
- Uphil teaming with central trumpet, with high Alumina runner bricks.
- Ingot mold of special design to control micro segregation.
- Ingots dressing before reheating.
- 16 Ingot capacity Soaking with Hyderaulic doors.

