



Star Wire Group

A Special Steels Manufacturer

PRODUCTS

Valve steel



Special Steel



Forging



Defence



Casting



Aerospace

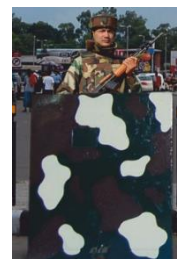




Star Wire Group



- Today company is known as **a special steels manufacturer** in shape of Castings, Rolled & Forged Components.
- A professionally managed company with sales turnover **\$100 Mn** in FY2019- 20.
- Targeting **\$150Mn** sales in FY2024-25.
- Pioneered indigenous development of **Engine Valve Steel, Armor Steel ,Castings for power generation** & several other steels.
- Focus on **import substitution** for Auto components, Defense, Power, Nuclear, Aero space & other sectors.
- Proactive approach towards corporate social responsibility
Operating dispensaries, aiding schools & old-age homes.



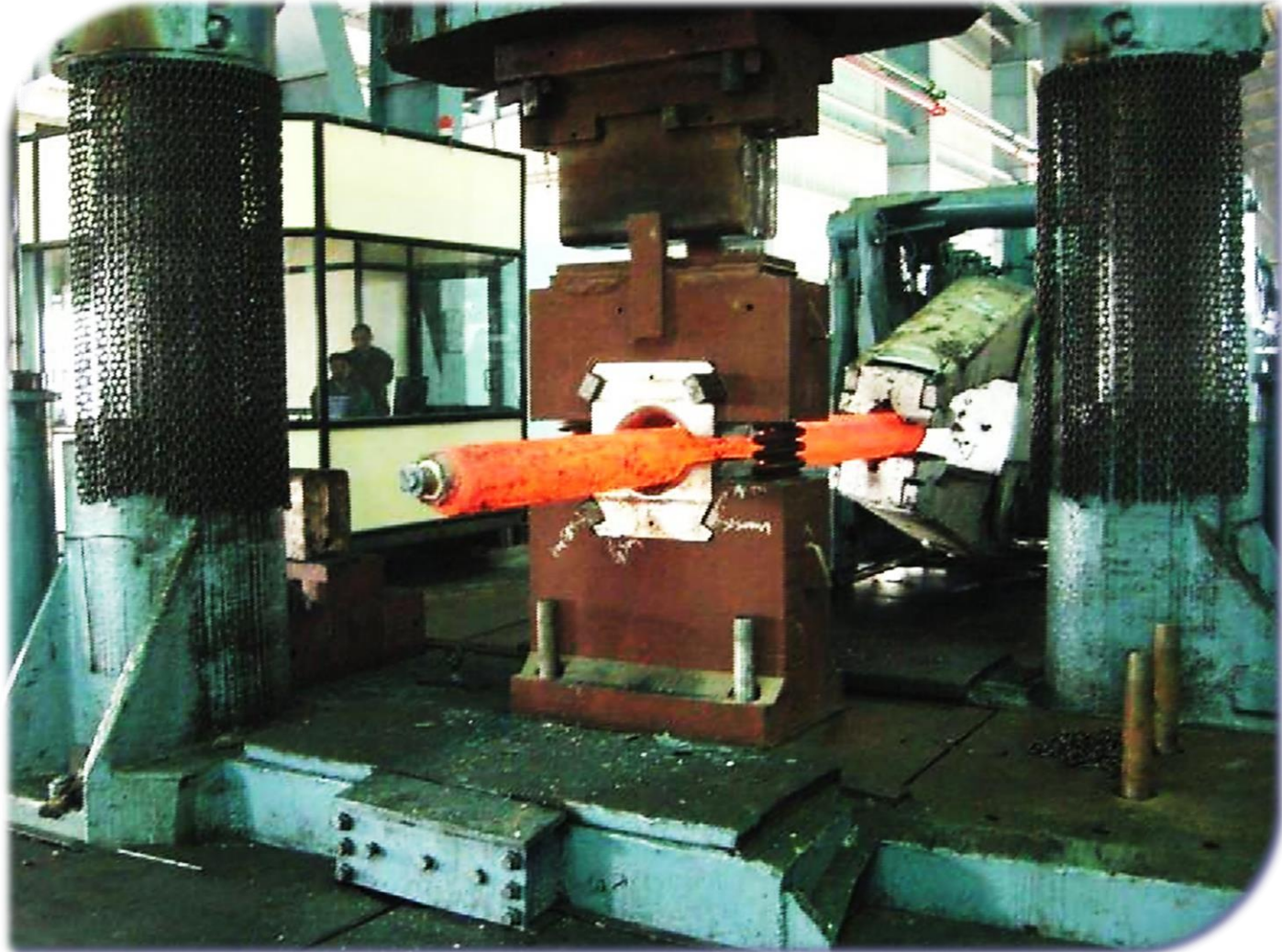
STEEL MELTING SHOP



- Electric arc furnace- **3 Nos**
- Ladle refining furnaces- **4 Nos**
(Total 120 MT)
- Argon Oxygen Decarburizer- **1 No**
- Vacuum degassing/ vacuum oxygen decarburizer- **2 Nos**
- Induction furnace- **2 crucibles**
- **Electro Slag Refining Furnace**
- **Vacuum Arc Remelting Furnace**



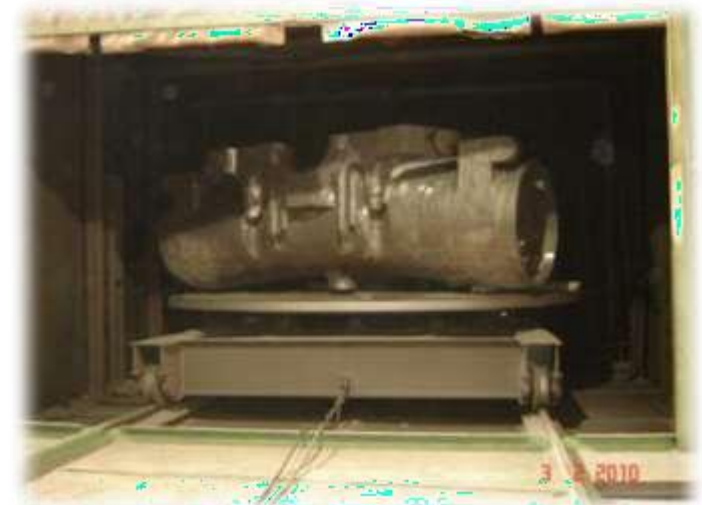
OPEN DIE FORGING PRESS - 2000MT



HEAT TREATMENT & FETTLING SHOP For Steel Castings & Heavy Fabrications



- Total no. of HT Furnace – 6nos
- Min. Size – 2.0 x 1.5 x 1 m
- Max. Size - 8.5 M dia. x 2.0 M height
- 7 M x 5 M x 3.5 M height
- Max. Wt. capacity - 80 Mt & 40 Mt
- Oil, Water & Polymer quenching facility
- Shot blasting - 8M x 8M SIZE- 1No
- 4M x 4M SIZE- 1No





Experience & capability for Steel Castings & Forged, Rolled Steels



➤ Castings in various Grades of materials such as:-

- G20Mo5 for IP Outer Casings
- G17CrMo9-10 for IP outer Casings
- G17CrMoV510 for HP Outer, IP inner, HP Inner & ESV CV casings
- GX12CrMoWVNbN10-11) for Super Critical Temp Turbines
- ASTM A 743 CA6NM/CF3M/CF8M for Hydro Turbine
- High Tensile Carbon Steel Castings for General Engineering application.

➤ Present Capacity for Super Critical Steam Turbines Casings

- Up to 65 MT single pc for Creep Resistant Materials grades

➤ Forged & Rolled Steels

- We are already approved by BHEL / NTPC for Blade Steel, Fasteners, Generators Material Grade Such as: X12CrMoWVNb-N10-1-1, X22CrMoV121, X20Cr13.

A decorative graphic on the left side of the slide consists of three colored circles (black, orange, and red) arranged horizontally, followed by a vertical black line.

Group Company :

**STAR WIRE (INDIA)
ENGINEERING LIMITED**

Sec-58, Faridabad, Haryana, India

E- Mail: rajkumatpathak@starwire.in

Web site: www.starwire.in

● ● ● | **Plot Area: 7200 Sq. M**
Electrical Load: 1000 Kva



BAY 1
90m X 22m
70 Ton Capacity

BAY 2
90m X 22m
50 Ton Capacity



Strengths



- One Stop Destination for Sub Super & Ultra Super Critical Temperature Turbines, Nuclear, ship building, Defence components & equipment's.
- In-house facility from Melting to Finishing
 - Melting-----EAF, LRF, VD, VOD
 - Casting
 - ESR
 - VAR
 - Open dia. Forging
 - Rolling
 - Heavy Fabrication
 - Finish Machining equipment for Castings, Fabrications & Forgings
 - Assembly sub-assemblies and Hydro Testing
- A Veteran Team of experience metallurgist, welding, NDT and machining process experts on board of the company.

**Seamless
sourcing
from our
parent
company-
SWIL**

**In-House
facility at
SWIEL**

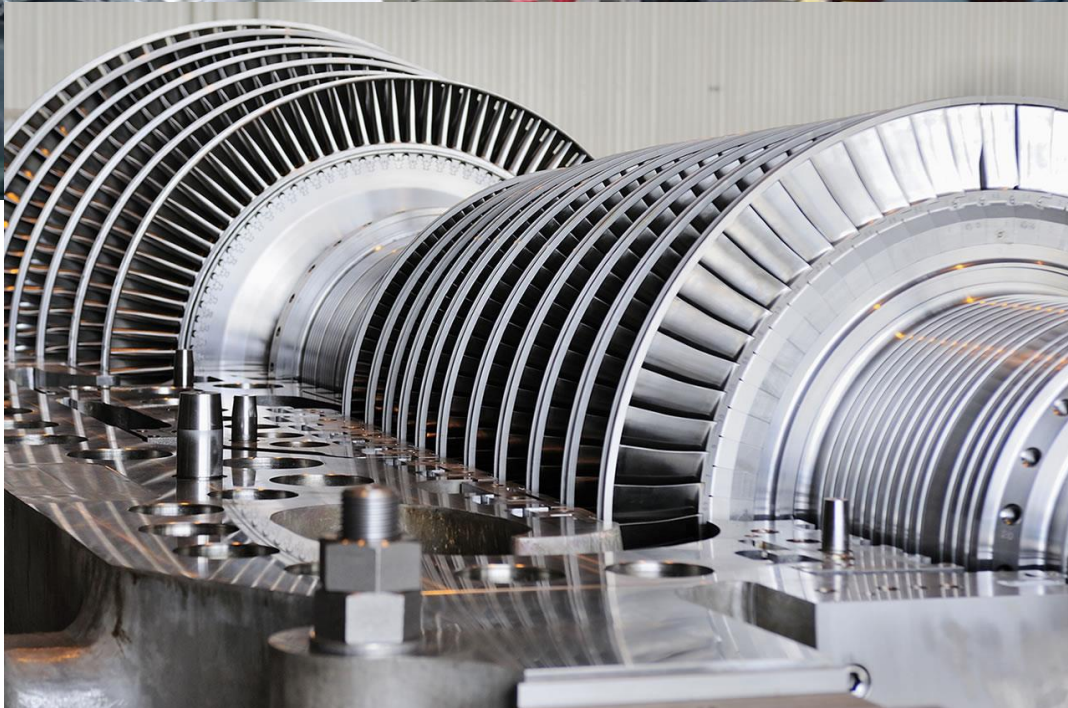


Presence of SWIEL



- Power Sector
- Defense application
- Oil and Gas
- Ship Building
- Critical Pump components
- Steel Plant equipment's
- Mining & Mineral Process

POWER SECTOR





Product Range For Power Sector



➤ Steam/ Gas/ Nuclear

- Steam Turbine Inner Casings & Outer Casings- 270 to 800 MW
- Large Size Bolts ,Studs & Cap Nuts for Parting Plane and Coupling Bolts.
- Control Valve Casings and Emergency Valve casings
- Valve Internals
- Reconditioning of Turbine Casings

➤ Hydro

- Main Inlet Valves
- Finish machined Large Size Castings/ Fabrications for Turbine & Generator

Glimpse of “Steam Turbine” components



- Component: **HP Outer Casing -270 MW**
- Weight: 28 Ton
- Customer : **BHEL Bhopal**
- Project : India Bull

HP OUTER CASING - 210 MW Project Wanakbori



Scope:- Finish Machining
(incl. **buttress threading**)
Customer : Siemens Vadodara



Under Machining



● ● ●
**Component:- Control Valve Casing-660 MW
(Inconel Overlaying)**

Weight-22 Ton

Customer : MHPS

Project : MALWA



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Component : IP Inner Casing 250MW
Customer : BHEL, HWR/NTPC
Project : Trishreen



High Pressure Inner casing –Finish Machined

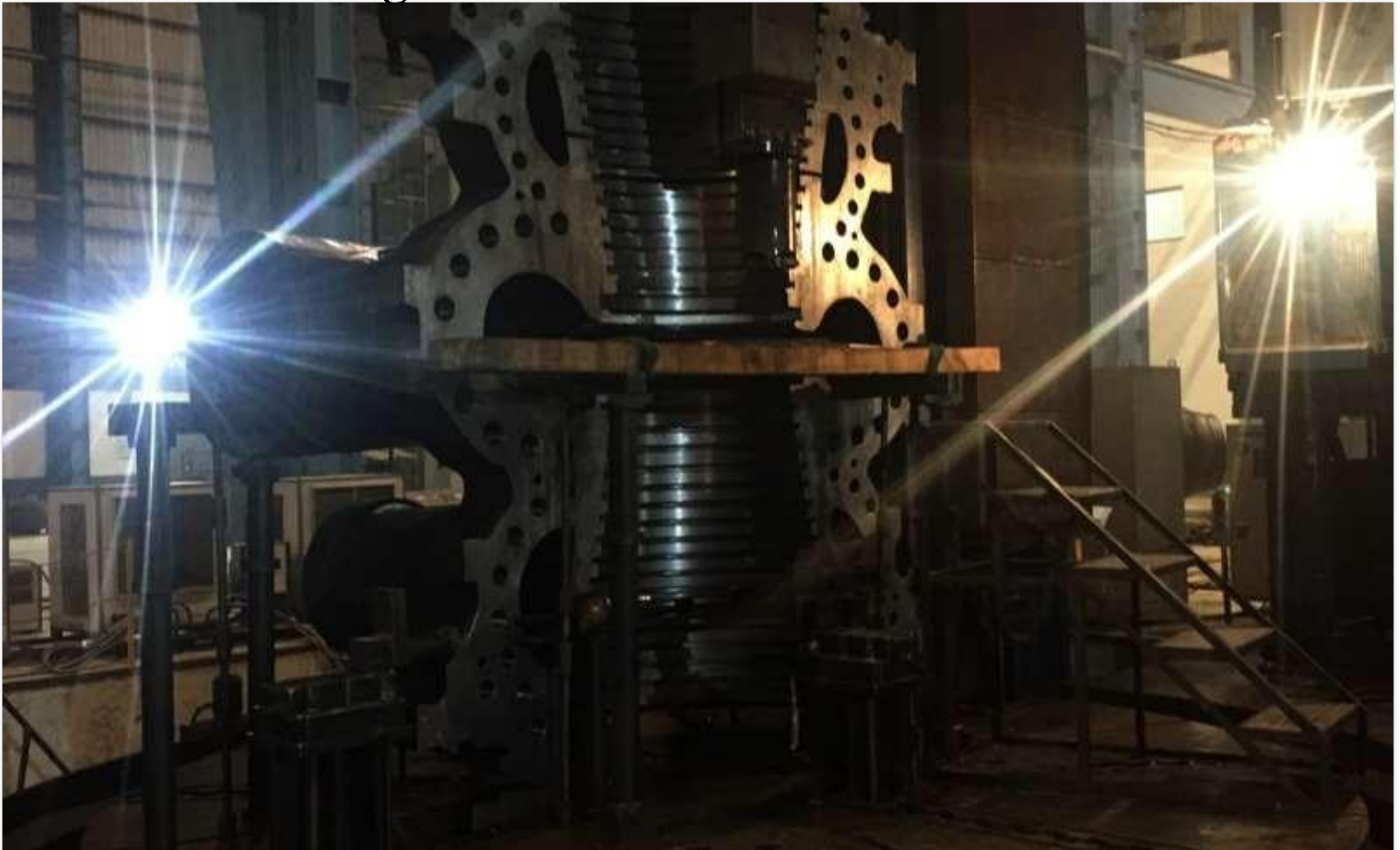


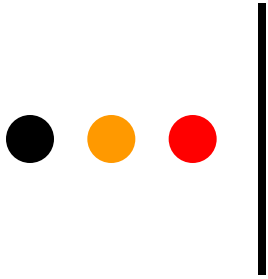
Finish Machined
HP Inner Casing- 250 MW
MATL : HW 19581
(GS 17CrMoV5-11)
Weight : 7 MT Each half
Complete with Blade Groove
and Shaft seal Groove Plan

● ● ●
Component : HP Inner-660 MW

Scope : Finish machined along with Blade Groove

Wt. : Single half 32MT





Component :

- **HP Inner Casing**

210 MW

Customer : **GE**

Project : **Ukai**



Customer : **GE Power**

Component : **HP Valve**

Project : 2 x 800MW Godda **Ultra Super Critical** Thermal Power Project



HYDRO TESTING OF VALVE @ 540 BAR

● ● ●
Component : 800 MW IP Inner
Scope: Pre Machined & NDT Qualified
Customer : BHEL
Material : 10% Chromium,
Assembly wt. 65MT



● ● ● | Presence in 'Gas Turbine' Business



7.5" Turbine Valve & Upper Head Customer- GE Water & Gas USA

Scope of Work:-

- Casting , Forging & Fabrication
- NDT examination (via Radiography, Ultra Sonic Testing, Magnetic particle & Die penetrant inspection)
- Finish Machining
- Primer



IST Footprint

RAMCO CEMENT 12.51 MW-Turbine frame
Customer-Siemens Vadodara



Scope of Work:-

- Manufacturing of casting & weldments
- Valve chest welding along with all weldments (i.e. Thermocouples, pipes)
- NDT examination (via Radiography, Magnetic particle inspection)
- Static Hydro testing at rough machine stage
- Finish Machining along with Valve chest machining
- Blue Contact testing
- Primer & painting

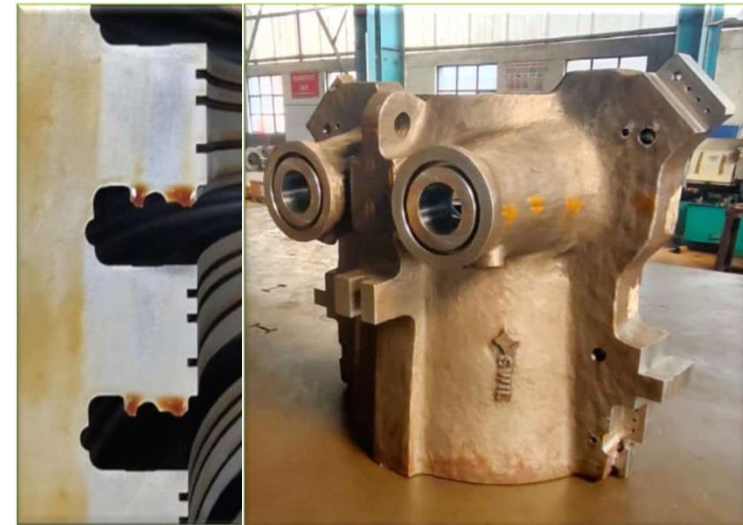


IST Footprint

Hindustan Zinc Limited Turbine casings
Customer-Siemens Vadodara

Scope of Work:-

- Casting
- Machining on joint plane
- Blue contact of Joint Plane
- Boring and Blade Groove machining
- NDT Inspection
- Dimensional Inspection





OIL & Gas



Customer : GE

Components : Boiler Feed Pump Turbine.

Project : Tanda

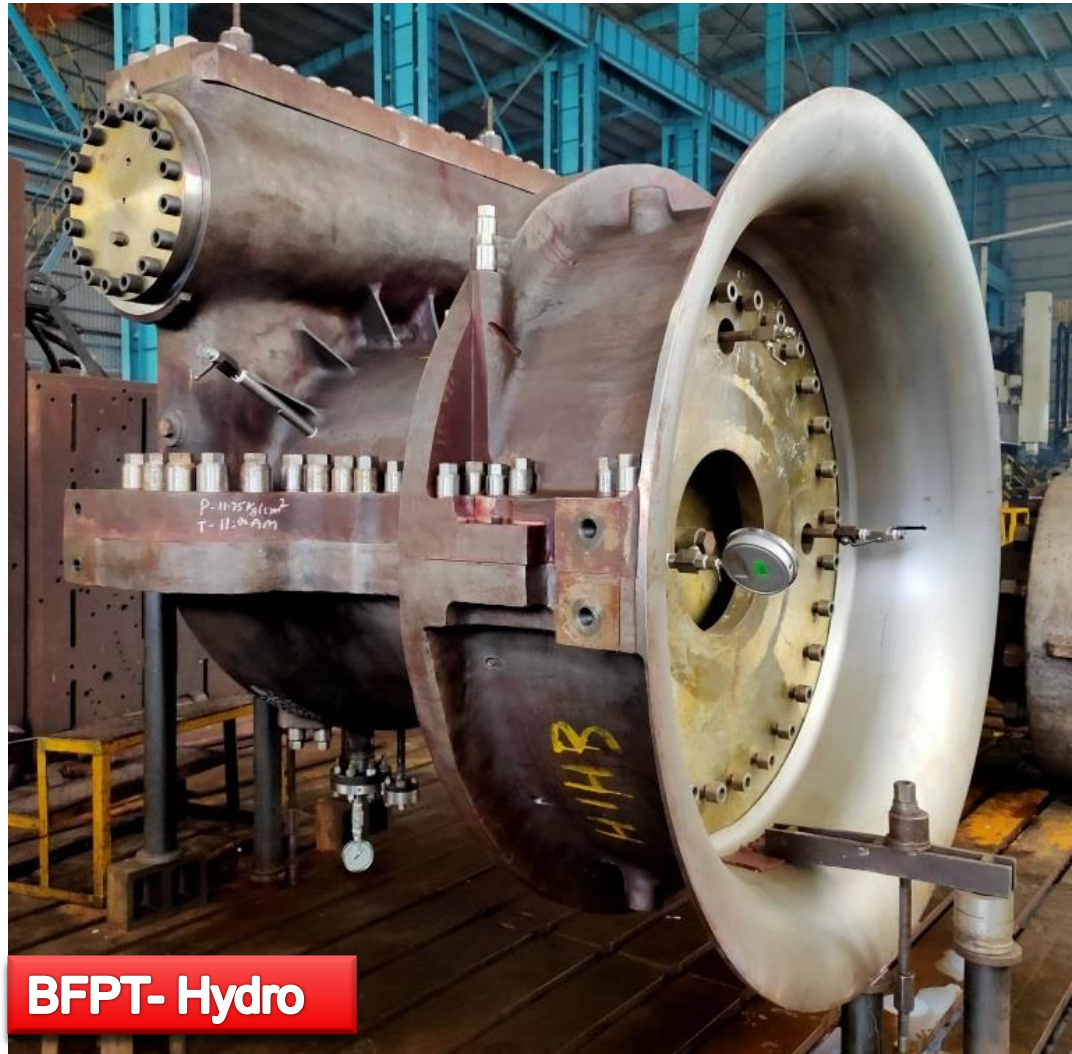
Material : GP 280 GH



Boiler feed pump Turbine



**Machined,
Welded &
Hydro Tested
BFPT casing
Customer-GE Oil
& Gas**



BFPT- Hydro

GODDA 2x660 MW -IP Inlet Pipes



Scope of Work:-

- Cast-Forge Fabrication
- Finish Machining
- Nitriding
- Painting
- Static Hydro Testing in 2 setups





Valve Internal



**INTER MEDIATE CONTROL VALVE
BONNET**



GOVERNING VALVE BONNET

● ● ●

Forged Parting Plane Fastener {Studs & Cap Nuts Expansion Sleeves} for Turbines Customer: Toshiba/GE/BHEL





Boiler Parts



- Component : Nozzle castings
- Customer : L&T- MHPS
- Material : 45 Cr -30 Ni, A297HH





Hydro Turbines



Main Inlet Valves (Spherical & Butterfly)

- Alignment with French Design company
- Capability to deliver MIV's with complete scope from Design, Manufacturing till Assembly
- **Butterfly Valve:- Range Up to 6 Meter Dia. Valve**
- **Spherical Valve:- Range Up to 1500 mm**



Spherical MIV



- **Specification: 600 Dia. PN 40-Spherical Valve,**
- **Project: Madkhyu Khola**
- **Customer: AHPL**



Spherical Valve DN 450 PN 40 Kampar Project



- Specification: **DN450, PN40**
- Customer : Andritz
- Project: Kampar



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2300 Dia, Butterfly Valve
Project : Yumretepe (Turkey)-
Assembled & Hydro Tested
Customer : D2FC



Fabricated and Machined Valve

Body/ Rotor

Material : S355

Wt. : 8MT





BUTTER FLY VALVE

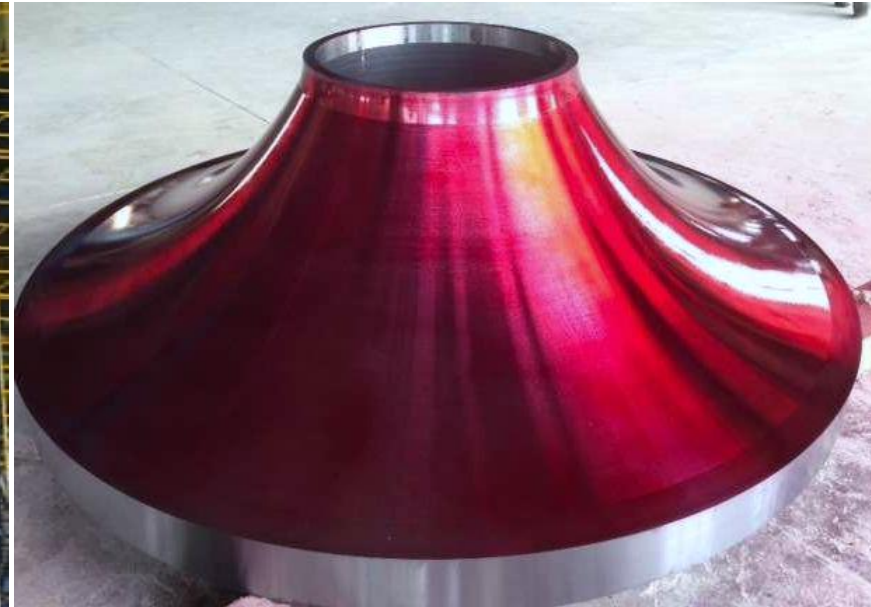


- DN 1000, Butterfly Valve
- **Customer: D2FC France**
- Project : Yumretepe
Turkey

OTHER HYDRO TURBINE COMPONENTS



Component : Casting & Machined Runner Band
Customer : Alstom Hydro
Material : CA6NM



Component : Casted and machined Crown
Customer : IMPSA
Material : CA6NM

● ● ●

**Fabricated, Assembled and Machined
Turbine housing
Customer : Toshiba
Project : Rudikhola Nepal**





Hydro turbine parts



**SPIRAL CASING – JOGNI
PROJECT**



Draft Tube-KMT PROJECT



Lower Shaft Cover

● ● ●
Component : **Labyrinth Ring**

Customer : **NHPC**

Material : **Stainless Steel**

Scope : **Ring Forging and machining**



Component : **Stay Ring**

Flange : **6m Dia**

Customer : **Andritz**





Products Offering to **Nuclear sector**



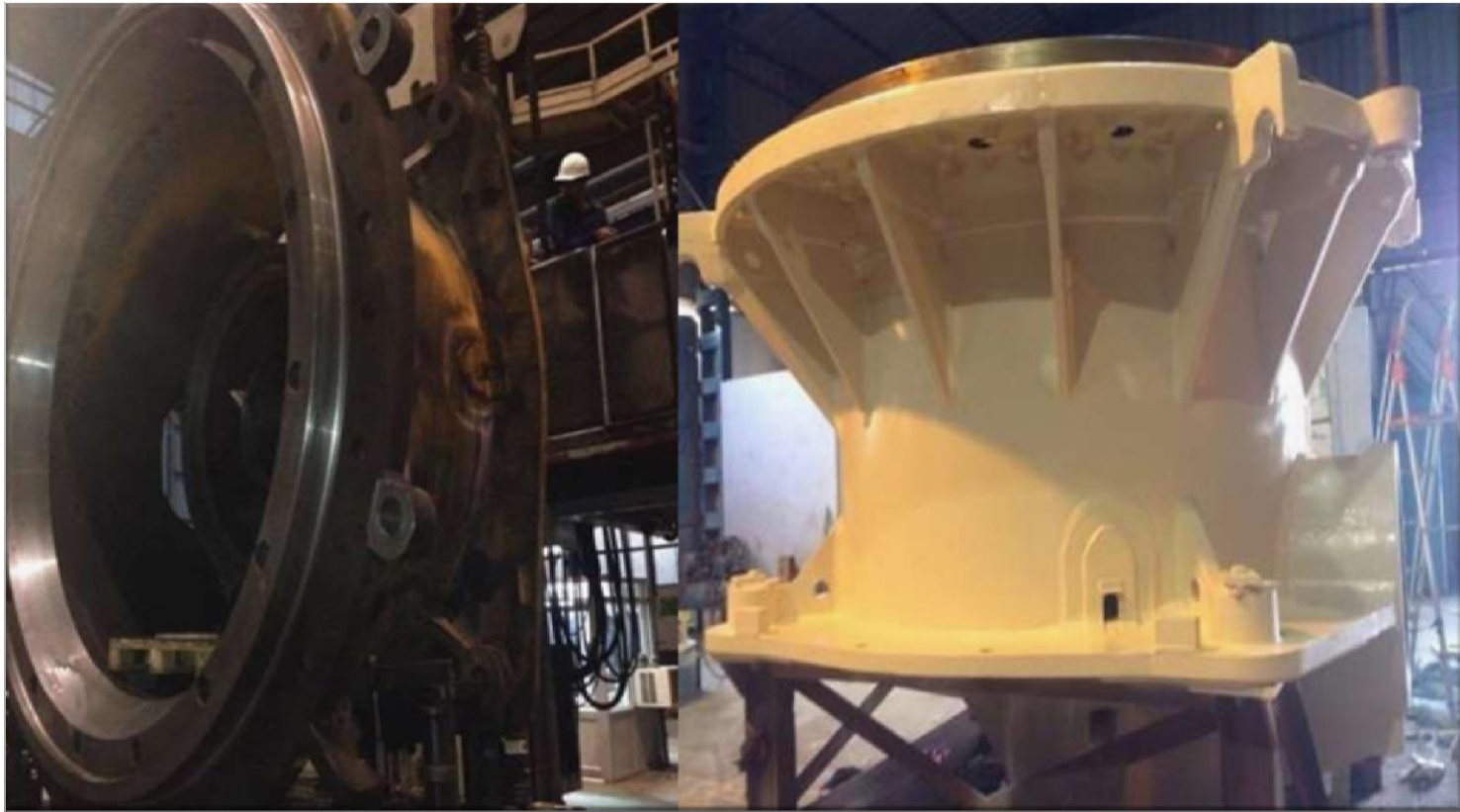
- Component : Nuclear driven turbine Parts
- Material : SS321
- Scope : Forging and finish machining



MINING SECTOR



- Component : Fabricated Crusher Fame, 30MT
- Customer : Metso
- Scope : Refurbishment, fabrication and finish machine



Fabricated Tunnel Boring Equipment component

Customer: Robbin's USA

Weight: 70 MT



Steel Mills Component



- Components: Caster Rollers
- Material: X20CR 13 + QT800
- Scope: Forging and finish Machining



DEFENCE SECTOR





Defence products



- High Speed Low Drag Empty Bomb body
450KG_ [Suitable for both NATO & Russian base Aircraft](#)
- High Speed Low Drag Empty Bomb body
250KG_ [Suitable for both NATO & Russian base Aircraft](#)
- 1000 LBS Shell
- 500 KG GP Bomb
- Proof shot- 155 dia.

450 KG HSLD BOMB ASSEMBLY





450 KG HSLD BOMB ASSEMBLY



| Particulars | 450kg HSLD |
|-----------------------|---|
| Weight | 450kg |
| Length | 2880mm with TU |
| Max. Dia | 360mm |
| CG Position with TU | 1165mm from Nose |
| Weight of filling(kg) | 210 |
| Carriage | By high speed combat aircraft (Suitable for both NATO & Russian base spacecraft) |
| Carriage speed | Up to 700kts(1.1mach) |
| Release speed | 650kts(0.98mach) |
| Suspension | Twin 250mm & 356mm |
| Effectiveness | Can be used against targets like runway railway tracks, bridge, docks, bunkers |
| Supplier Note | Can be used with both type of tail unit RTU (retarding tail unit) & BTU (ballistic Tail unit). Retarder Tail Unit (RTU) for high speed low level bombing Ballistic Tail Unit {BTU} for high speed high altitude bombing |

250 KG HSLD (high speed low drag) BOMB



| Particulars | 250kg HSLD |
|-----------------------|---|
| Weight | 250kg |
| Length | 1537mm with TU |
| Max. Dia | 290mm |
| CG Position with TU | 971mm from nose |
| Weight of filling(kg) | 101 |
| Carriage | By high speed combat aircraft (Suitable for both NATO & Russian base spacecraft) |
| Carriage speed | 863kts(1.3mach) |
| Release speed | 650kts(0.98mach) |
| Suspension | Twin 250mm & 356mm |
| Effectiveness | Can be used against railway marshalling yards, runways, hardened targets and built up installations |
| Supplier Note | Can be used with both type of tail unit RTU (retarding tail unit) & BTU (ballistic Tail unit). Retarder Tail Unit (RTU) for high speed low level bombing Ballistic Tail Unit {BTU} for high speed high altitude bombing |



500 KG BOMB BODY & 1000 LBS SHELL



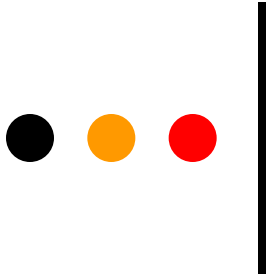
500 KG GP Bomb



1000 LBS Shell

● ● ● | **Proof shot- 155 dia. –**
Ordnance Factory Ambajhari





**THANK YOU
&
WE SOLICITE
YOUR PETRONAGE**