

A large, high-contrast photograph of molten steel being poured from a ladle. The steel is bright yellow and orange, creating a dramatic, funnel-like shape as it flows down a central channel into a circular mold at the bottom. The background is dark, making the glowing metal stand out.

Pioneers in Steel Castings for over 59 Years

About Karad Projects and Motors Limited – Foundry Division



Carbon Steel Castings | Stainless Steel Castings | Alloy Steel Castings | Creep Steel Castings



1. Purpose, Vision, Mission , Values.

2. Who we are
3. Our Location
4. Our Capabilities
5. Our Certifications
6. Our Manufacturing Facilities
7. Our esteemed customers
8. Product Showcase

Purpose

- Enhance benefits to our customers, shareholders and employees.
- Sustain and improve the environment in which we operate.
- Ensure safe work environment by minimizing occupational hazards and accidents while performing foundry operations.
- Build an image of the company as a professionally managed organisation having human face.

Vision

The Karad Projects and Motors Limited – Foundry Division shall be the benchmark steel casting foundry in India and become the preferred choice of customers, suppliers and employees.

Mission

The Karad Projects and Motors Limited – Foundry Division shall be known as a reliable, innovative and cost effective solution provider for steel castings.

Values

- **Accountability** : We deliver on our commitments to customers, and other stakeholders.
- **Customers** : We fulfil the customers' expectations in high quality and delivery.
- **Collaboration** : We work as a team across all departments to meet customers' needs and achieve success.
- **Innovation** : We strive for continual innovation through best foundry practices.
- **People** : We take pride our dedicated workforce and the communities in which they live and work.
- **Quality** : We are committed to delivering the highest quality steel castings.
- **Sustainability** : We are committed to keeping operations sustainable for the health of the environment and surrounding community.
- **Technology** : We are leaders in implementing latest technologies to improve our customers' expectations.
- **Safety** : We are committed to conduct all operations safely to protect our employees, customers, and environment.

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About Karad Projects and Motors Limited



The Karad Projects & Motors Limited – Foundry Division (KPML) is a subsidiary company of **Kirloskar Brothers Limited (KBL)**.

KBL is a flagship company of \$ **4.0 billion Kirloskar Group**

Key Facts about Kirloskar Group

Giving Employment to **6,000+** people

Manufacturing across **16** plants

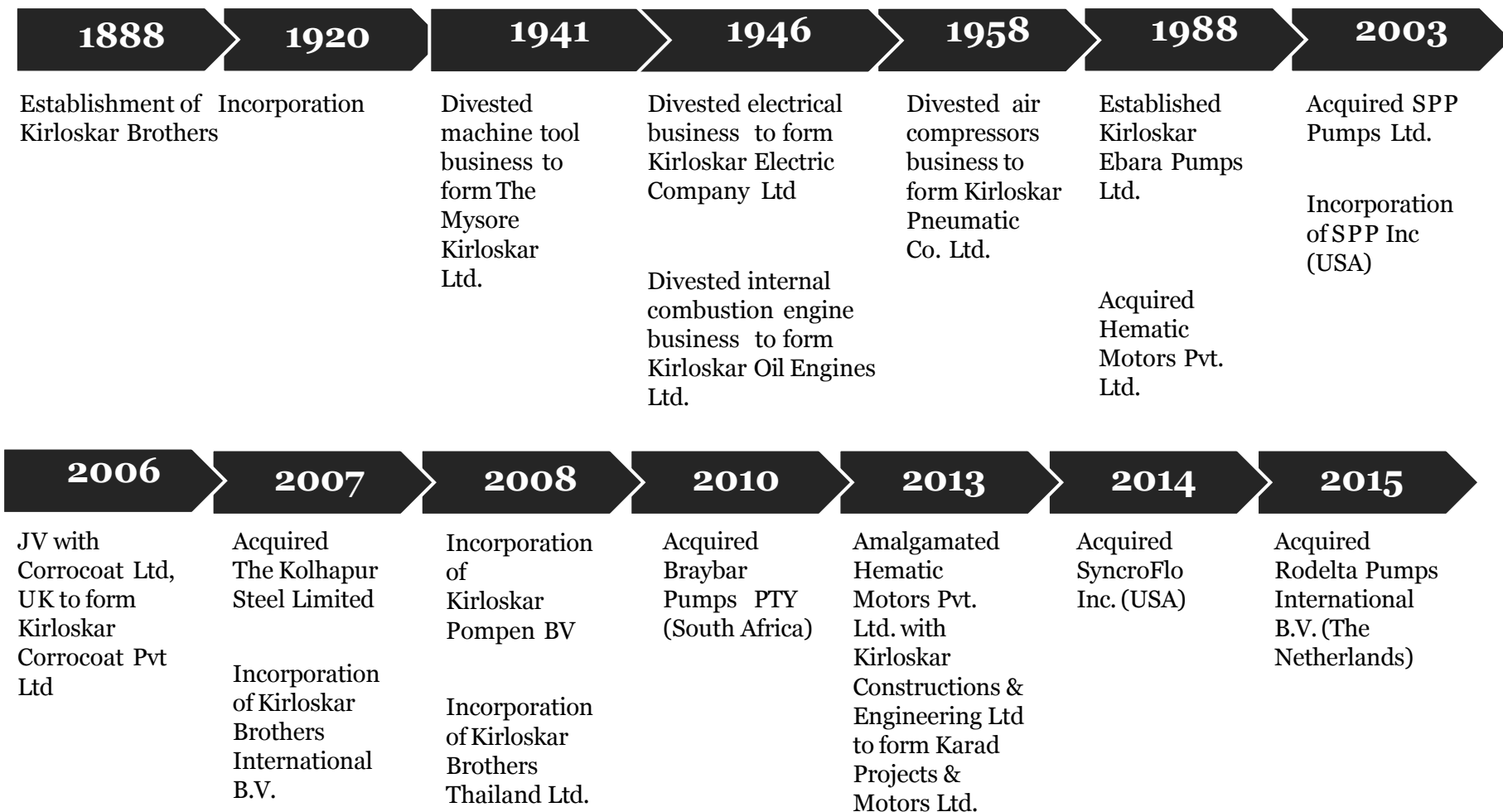
Serving the world for **133+** years

9th manufacturing company to get N and NPT certification from the American Society of Mechanical Engineers

pump

The graphic consists of a central dark grey cross shape. A horizontal bar across the middle of the cross contains the text 'Key Facts about Kirloskar Group'. Four text blocks are positioned at the ends of the cross's arms, providing key statistics and facts about the company.

Kirloskar Group Journey



Kirloskar Group Joint Ventures and Subsidiaries



**SPP Pumps Limited,
United Kingdom**

- Leading market presence in Fire Pump Packages business. Lowest life cycle cost pump range
- R&D, manufacturing and test facilities in UK



**SyncroFlo Inc.,
The United States of America**

- Leading American pump Packager
- Provides Booster and HVAC Packages



**Rodelta Pumps
International B.V., The
Netherlands**

- Leading manufacturer of API and Non-API pumps
- Specialization in O&G, Paper, Chemical and other fluid management applications



Enriching Lives

**Kirloskar Brothers
(Thailand) Limited, Thailand**

- Sales and packaging of centrifugal pumps for South East Asian markets



Enriching Lives

**Kirloskar Brothers Europe
B.V., The Netherlands**

- Sales and packaging of centrifugal pumps for European markets

Kirloskar Group Joint Ventures and Subsidiaries



Braybar Pumps Limited,
South Africa

- Manufacturing and sales of high head Multi-Stage pumps, Rubber lined slurry pumps and white metal lined bearings



Kirloskar Ebara Pumps
Limited

- Centrifugal pumps as per API 610
- Multistage Boiler feed pumps
- Steam turbines and Turbo-gensets
- Hydraulic Power Recovery Turbine (HPRT)



Karad Project's And Motors
Limited

- Motor manufacturing company with expertise in manufacturing of Stampings, Stators, Rotors, AC rotating machines, Aluminium Die-cast Connecting Rods and Pump assemblies.
- Also manufactures energy efficient motors for various applications .

Enriching Lives



Kirloskar Corrocoat Private
Limited

- Energy efficiency coatings
- Sea water application
- Single point solution provider for applications in Infrastructure, Water, Power, and Oil & Gas



The Karad Projects and Motors Limited Foundry Division

- **Established** 1965
- **Area** Total – 86,157 sq. m
Covered – 40,469 sq. m
- **Manpower** 245 Nos
- **Sectors** Pumps & Valves
Thermal & Hydro Power
Earth Moving Equipment
Mining & Crushing
Pulp & Paper
Ship Building
Steel Plants and General Engineering.
- **Metallurgy** Stainless Steel, Duplex & Super Duplex
Carbon steel & Alloy steel
Creep steel

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Kolhapur : The Foundry and Engineering Cluster



- Karad Projects and Motors Limited – Foundry Division is situated on the Pune – Bangalore highway.

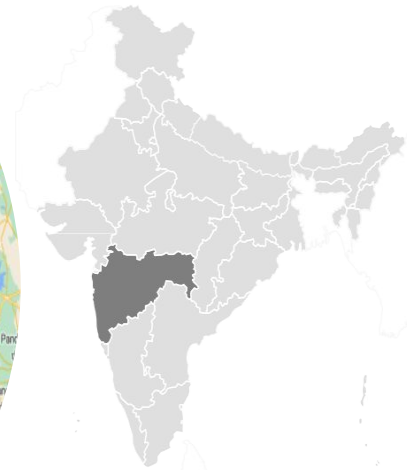
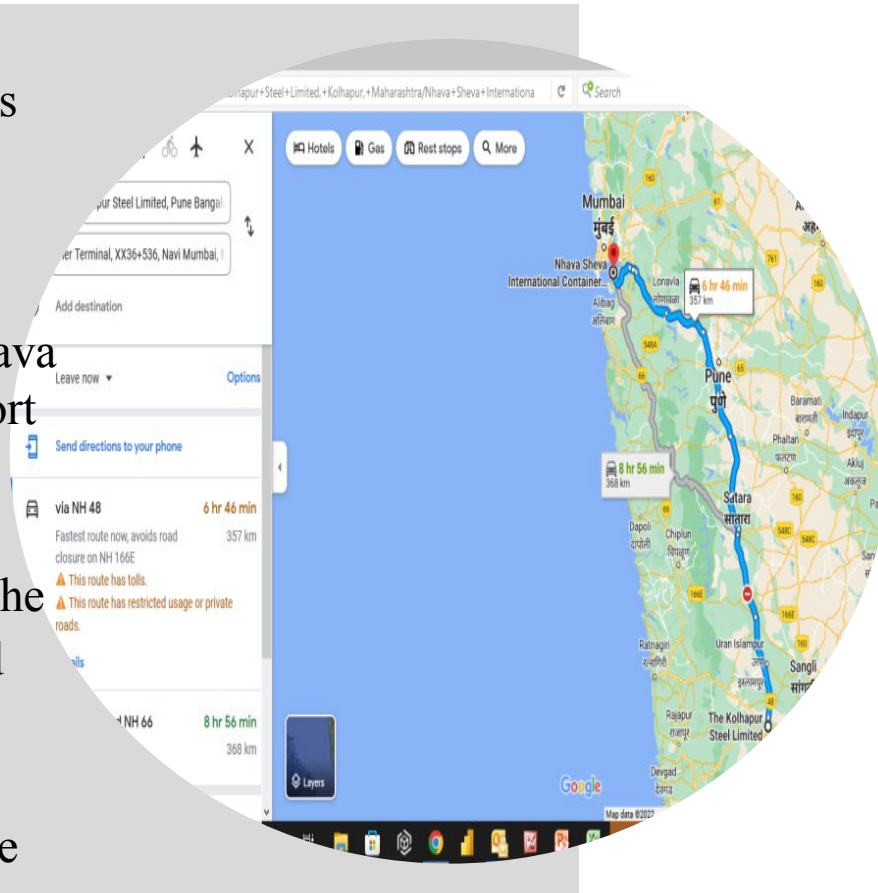
- Excellent Connectivity to Nhava Sheva Port, Mumbai. Transport time 1 day (Within a day).

- Located in Kolhapur, one of the most prominent foundry and engineering clusters in India

offers

many strategic advantages like

Skilled and Qualified Manpower.



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Product Grades



Type of Casting	Material Specification
Carbon Steel Castings for General Engineering purpose	IS-1030, ASTM A 27, ASTM A 148, IS-2707, IS:2708, IS-2644, DIN-1681, LCB, LCC
Corrosion Resistant Stainless Steel Castings	ASTM A 351, Gr. CF-8M, CF-8, CA6NM, CN7M, CF3M
Duplex Stainless Steel Castings for high pressure and corrosion resistant application	ASTM A 890 & ASTM A 995 Gr. 1A, 3A, 4A, 1B
Super Duplex Stainless Steel Castings for high pressure and corrosion resistant application	ASTM A 890 & ASTM A 995 Gr. 5A, 6A
High Alloy Castings resistant to abrasion and cavitation corrosion	ASTM A 743, Gr. CA6NM, CN7M, CA15 and CF8M
Creep Steel for High temperature applications	WC6, G17CrMo5-5, WC9, G17CrMoV5-10, G17CrMo9-10, G20Mo5
Ship & marine Applications	GOST :977-88
Heat resistance steel	HK40

Weight Range & Capacity



Single Pc. Weight Capacity in different
Materials

Material	Weight Range
Total Installed Capacity	220 MT Per Month
Carbon/Alloy/Creep Steel	200 Kg to 10.0 MT
Stainless Steel	200 Kg to 10.0 MT

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ISO 9001:2015 by TUV-NORD



ISO 14001:2015 by TUV-NORD



**NORSOK M630 Ed.6,
MDS D56 Rev. 05
ASTM A995 GR.5A**



**Pressure Equipment
Directive
2014/68/EU (PED)**

Certification & Approvals



FORM XVI-D
[see regulation 4C (2)]

Serial No. Foundry/17/097  File No. P-30016/209/2022-Boiler

Central Boilers Board
Certificate of Approval for Well Known Foundry

This is to certify that the Inspection and Quality Management System of:

M/s **The Kolhapur Steel Limited,
Pune- Bangalore Highway,
Shiroli (Pulachi), Tal. Hatkanangale,
Dist. Kolhapur-416122
Maharashtra**

has been evaluated by the Central Boilers Board and has been granted recognition under regulation 4C(2) of the Indian Boiler Regulations, 1950, as a Well Known Foundry for the manufacture of Boiler Quality Castings upto a maximum of 14000 Kgs./piece in Carbon Steel, Alloy Steel, Stainless Steel and Duplex Steel.

for their factory at **Pune- Bangalore Highway,
Shiroli (Pulachi), Tal. Hatkanangale,
Dist. Kolhapur, Maharashtra**

*This Certificate is valid for five years, i.e. upto 5th April, 2029
Validity is subject to the adherence to the quality control prescribed under the provisions of the Indian Boiler Regulations, 1950.*

18th April, 2024
Date of Issue

Secretary

Certificate No. 522 

IBR Well Known Foundry

Page 1 of 2
Certificate No: LR245320WA
Issue Date: 01/04/2023
Expiry Date: 31/03/2026

Approved Manufacturer Of Steel Castings

Manufacturer	The Kolhapur Steel Ltd
Address	R S No. 10, Hissa No. 3, Pune - Bangalore, Highway, Shiroli (Pulachi), Kolhapur, 416122, India
Type	Steel Castings

This approval is subject to compliance with the Rules for the Manufacture, Testing and Certification of Materials. The full details of the processes and grades to which this approval applies are given on subsequent pages of this certificate.

This certificate is issued to the named manufacturer, and is valid until the expiry date specified. Lloyd's Register is to be notified of any change that may affect the validity of this certificate, and reserves the right to cancel or withdraw this certificate.



71 Fenchurch Street, London, EC3M 4BS, United Kingdom


LIR Head
Metallurgy Team Leader to Lloyd's Register
EHEA
A member of the Lloyd's Register group

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information and advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

LR Approved Foundry



Indian Register of Shipping

Certificate No.: 2025WAGC062

WORKS APPROVAL CERTIFICATE

This is to certify that based on the existing manufacturing facilities and satisfactory assessment of manufacturing and quality control procedures by our Surveyors, the name of

THE KOLHAPUR STEEL LTD

Pune - Bangalore Highway, Shiradi (Pulachi), Kolhapur, Maharashtra, India (MS 122)

is included in the list of approved works in accordance with the relevant requirements of rules/standards/code described below:

WORKS TYPE	: FERROUS FOUNDRY
PRODUCT TYPE	: Hull and machinery steel castings for general application
APPLICABLE RULES/STANDARDS/ CODE	: CNA, Pt.2 of IS Rules and Regulations for the Construction and Classification of Steel Ships
SCHEDULE OF APPROVAL	: See ANNEXURE I

This Certificate is valid until : 30/01/2030

PLACE OF ISSUE: MUMBAI
DATE OF ISSUE: 11/01/2025
LOCAL SURVEY OFFICE: MUMBAI



FOR: INDIAN REGISTER OF SHIPPING
For Indian Register of Shipping
Digitally Signed by: Karthik S
Lokesh, MS12202
Signing Date: 11-01-2025 09:59:55
Signed Electronically in accordance
with IAL SCRS 32 Para.2

Karthik S
Principal Surveyor


This Certificate is issued upon the following terms and conditions as laid down in the Society's Regulations:-

While Indian Register of Shipping, a Classification Society, along with its subsidiaries and services (hereinafter referred to as the Society) and its Board/Committee use their best endeavours to ensure that the facilities of the Society are properly carried out, in providing services, information or advice neither the Society nor any of its servants or agents warrants the accuracy of any information or advice supplied. Except as set out herein neither the Society nor any of its servants or agents (on behalf of each of whom the Society has agreed this clause) shall be liable for any loss, damage or expense whatsoever sustained by any person due to any act or omission or error of whatsoever nature and however caused of the Society, its servants or agents or due to any inaccuracy of whatsoever nature and however caused in any information or advice given in any way whatsoever by or on behalf of the Society, even if held to account to a breach of warranty. Nevertheless, if any person uses services of the Society, or relies on any information or advice given by or on behalf of the Society and suffers loss, damage or expense thereby which is proved to have been due to any negligent act, omission or error of the Society, its servants or agents or any negligent inaccuracy in information or advice given by or on behalf of the Society then the Society will pay compensation to such person for the period time up to but not exceeding the amount of the fee charged by the Society for that particular service, information or advice. Any action of claim for loss, damage or expense, as referred to above shall be made in writing to the Society's Head Office within six months of the date when the service, information or advice was first provided, failing which all the rights to any such claim shall be forfeited and the Society shall be relieved and discharged from all liabilities.

Form No.: IRB_WAC_OC (Rev.2) Page 1 of 3



TID: IRB202502025WAGC06200117



The Institute of Indian Foundrymen


(Affiliated to World Foundry Organization)
IIF CENTER, 335, Rajdanga Main Road, Kolkata - 700 107

Certificate of Membership

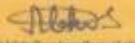
This is to certify that

THE KOLHAPUR STEEL LIMITED

is an Industry Member of
this Institute



Unique Membership No.
CM/18516/W/KOL



Dr. Anandkumar Roychowdhury (Advisory)
Executive Director

Member since : 08/05/2023
Valid up to : 31/03/2026

IRS Approved Foundry

Member of IIF

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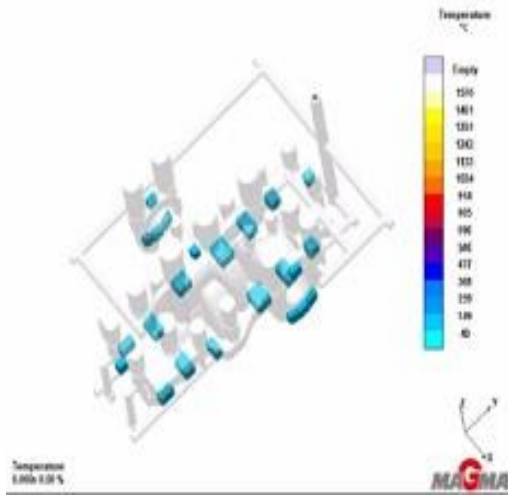


Karad Projects and Motors Limited – Foundry Division has In-house Pattern facility and it includes:

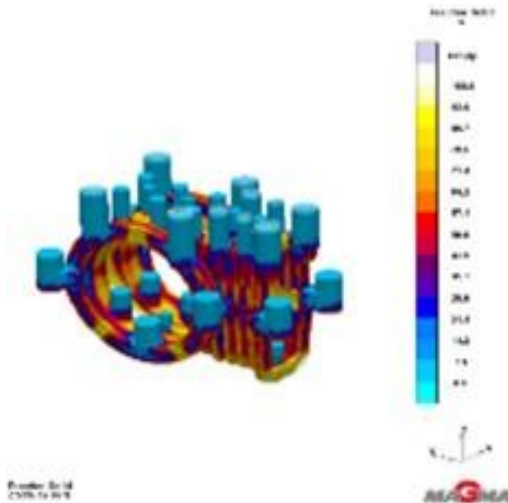
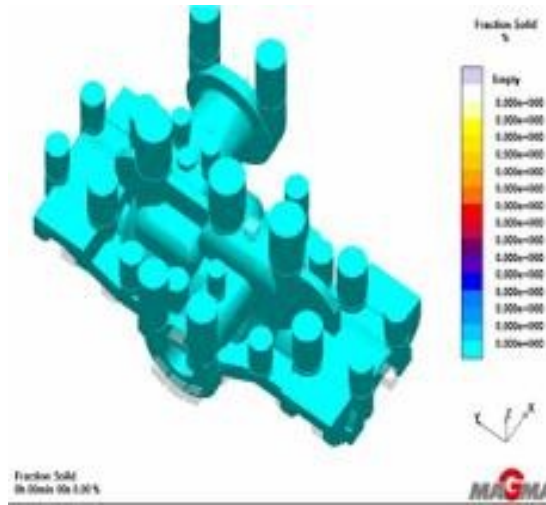
- ❑ Design
- ❑ Layout
- ❑ Maintenance of Existing Patterns with suitable Equipment
- ❑ Pattern Shed with Stacks for Pattern Storage

New Patterns and Core Boxes are manufactured by our dedicated pattern vendors located nearby equipped with CNC & VMC setup.

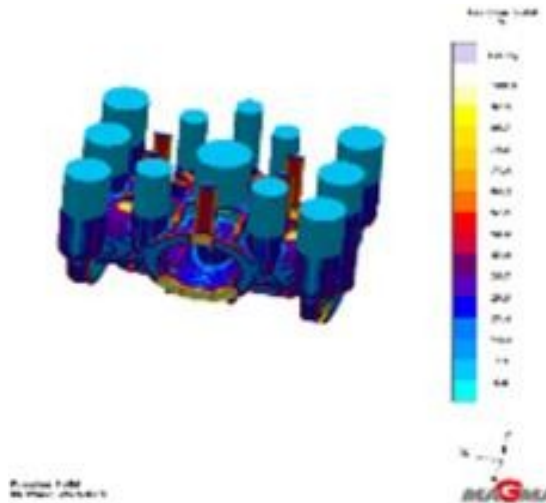
BB3 Pump



BB3 Pump



42"-150 GTV Body Casting



24"-600 Plug Valve Body Casting

State of the art Simulation Software Magma 6.0 and 8 Core processor.

Omega Continuous Sand Mixer 20 MT/Hr



- Sand System – Alpha set
- 20 MT/Hr Omega make continuous sand mixer.
- 3 MT/Hr Omega make continuous sand mixer.
- 10 MT/hr. Omega make sand reclamation unit.
- Electric mold heating system.

3D Printing Machine

We have access to one of World's Largest 3D printing machine of KBL.

Moulds created by 3D printing provide Superior Casting Quality especially for castings having weights up to 10T.

Melting Shop

Induction Furnace - 12 MT



AOD – 7 MT with Pollution Control



Ladle Preheater



5 Nos. Induction Furnaces with

- 2 MT capacity : 1 No.
- 5 MT capacity : 2Nos.
- 8 MT capacity : 1 No.
- 12 MT capacity : 1 No.

- Argon Oxygen Decarburization (AOD) - 7 MT
- PNG Fired Ladle Preheater
- Wire Injection Machine for Deoxidization



KPML – Foundry Division Heat treatment shop is equipped with three Bogie Type HT furnaces well calibrated as per API 6A standard.

PNG Fired Furnaces

- 5 m x 4 m x 2 m – 13 MT
- 3 m x 3 m x 1.4 m – 10 MT
- 2.8 m x 2.4 m x 1.8 m - 4MT

Water Quenching Tank – 6.1 m x 5.2 m x 3.8 m – 1,20,000 Ltrs.

PNG Fired Furnace – 10 T with Automated water Quenching



quenching video_20230205_0-1541.mp4

Auto water quenching with agitation system.

Adequately supported with a 60 HP pumping system to achieve good hardenability.

Fettling Shop



KPML – Foundry Division Fettling shop is equipped with-

- ❑ Shot Blasting machine of 3MT & 7MT capacity.
- ❑ Grit Blasting machine of 15MT capacity.

Infrastructure upgradation in last three years

KPML – Foundry Division is constantly upgrading its infrastructure to cater to the requirements of its esteemed customers.

15 & 25 MT EOT crane



- ❑ 2 nos. 15 MT EOT cranes & 1 no 25MT EOT crane – to reduce the waiting time for movement of castings.

Plano Millar



- ❑ Plano Millar– to ease the machining activity with lead time the Plano millar machine has added in machine shop.

Infrastructure upgradation in last three years

Pattern Storage Shed



- ❑ New Pattern Storage shed – to improve the life of patterns & Easy traceability.

Shot Blasting machine



- ❑ 7 MT Shot blasting machine – to handle higher size castings.

Machine Shop

KPML – Foundry Division Offers castings in machined condition.

The company has in-house machining facilities viz.

- Vertical Turning Lathe – 4 m diameter
- Vertical Turning Lathe – 2 m diameter
- Plano Milling Machine – 3m x 1.5m x 1.5m
- BATALA Lathe Machine - 4.5 m Length X 900mm Center Height

Additionally KPML has a well established and dedicated vendor base for finish machining activities. These Vendors are equipped with advanced CNC machines and CMM.



Quality- Lab Chemical & Sand Testing

Image Analyser for micro structure study



Spectrometer – 31 Elements including Nitrogen Facility



KPML – Foundry Division has a well equipped Laboratory for testing all requirements of product quality

- ❑ Microstructure check facility

Chemical Testing

- ❑ Spectrometer –31 Elements (Carbon, Silicon, Manganese...including Nitrogen Facility)
- ❑ Storlines Apparatus for Wet Analysis
- Standard Samples

Sand Testing

- ❑ Universal Strength Machine – 60 Kg/cm²
- ❑ Sand Muller - 5 Kg capacity
- ❑ Rapid Moisture Tester
- ❑ Sieve Shaker
- ❑ Permeability Meter
- ❑ Code Permeability Tube
- ❑ Mould Permeability Tester

Quality-Lab Mechanical Testing

Impact Testing machine with
Cryogenic testing up to -46°C



Universal Testing Machine



Brinell Hardness Tester



KPML – Foundry Division testing Laboratory is also equipped with Mechanical testing equipment

Mechanical Testing

- ❑ Universal Testing Machine – 100 MT
- ❑ Impact Testing with Cryogenic testing up to - 46°C
- ❑ Machine Profile Projector for ‘V’ Notch Insp.
- ❑ Broaching Machine for Charpy ‘V’ Notch
- ❑ 0.2% Proof Test Facility with Extensometer Calibrated ASTM B2

Quality-Non Destructive Testing

All NDT facility developed in house to meet the customers specific quality requirements with-

- ❑ Ultrasonic Inspection - Einstein II DGS & Ultrasonic Inspection - da. Vinci. Delta
- ❑ ITW – Magnaflux Probe & Yoke for magnetic particle inspection
- ❑ Dye Penetrant Test- Water & Solvent Base
- ❑ Qualified Manpower-
 - ASNT TC 1A 2016 : 3 qualified persons (UT-MPT-DPT)
 - ASNT TC 1A 2016 : 2 qualified persons (VT)



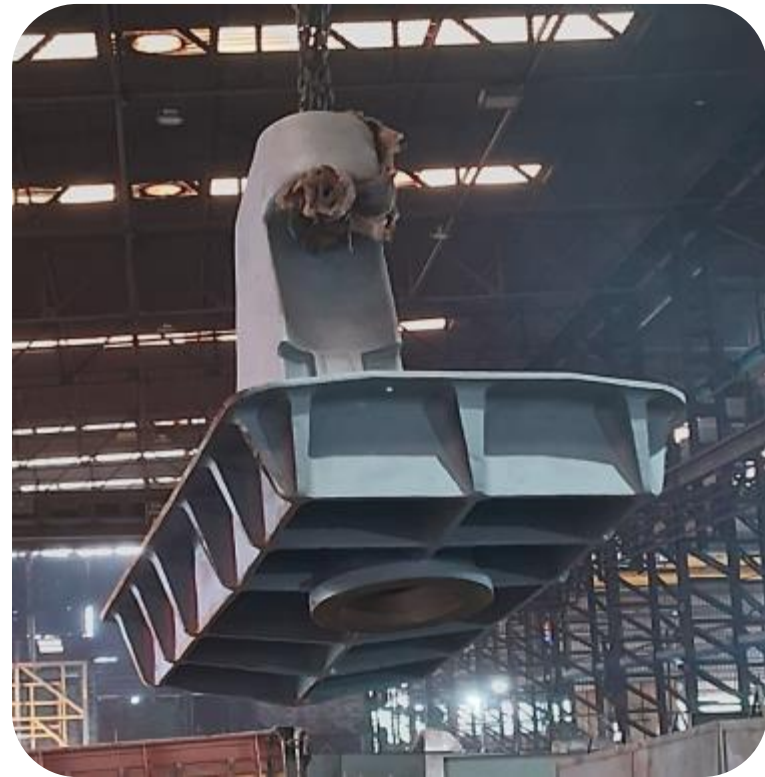
Infrastructure upgradation_ In-house RT facility



RT facility developed in house to meet the RT quality requirements with-

- ❑ CO-60 source which can carry out up to 170 mm casting wall thickness.
- ❑ IR 192 source which can carry out up to 60 mm casting wall thickness.
- ❑ Qualified Manpower-
 - BARC LVL-2: 1 Engineer
 - BARC LVL-1: 2 Engineers
 - ASNT LVL-2: 1 Engineer





- **Stern Post** (11830 Kg Weight)
- Fabricated design part, which was earlier imported from Russia. KPML has successfully developed & delivered casting with 100% RT & UT

Product Showcase_100 % RT Quality castings



- **Rudder** (3330Kg Weight)
- KPML – Foundry Division has successfully developed & delivered casting with 100% RT & UT

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Our Major Customers



Pumps	Domestic Clients			DBI Pumps & Valves	International Clients
	 Enriching Lives KIRLOSKAR BROTHERS LIMITED				

Valves	Domestic Clients			DBI Pumps & Valves		 Flow Controls	International Clients
	 Enriching Lives KIRLOSKAR BROTHERS LIMITED		 ENGINEERING (INDIA) LIMITED				

General Engineering	Domestic Clients				International	
	 	 NEW FRONTIERS. NEW DREAMS	 AN ISO 9001 COMPANY			

Our Major Customers



Steam Turbines



Hydro Turbines



Enriching Lives

KIRLOSKAR BROTHERS LIMITED



International Clients



Shipping & Marine



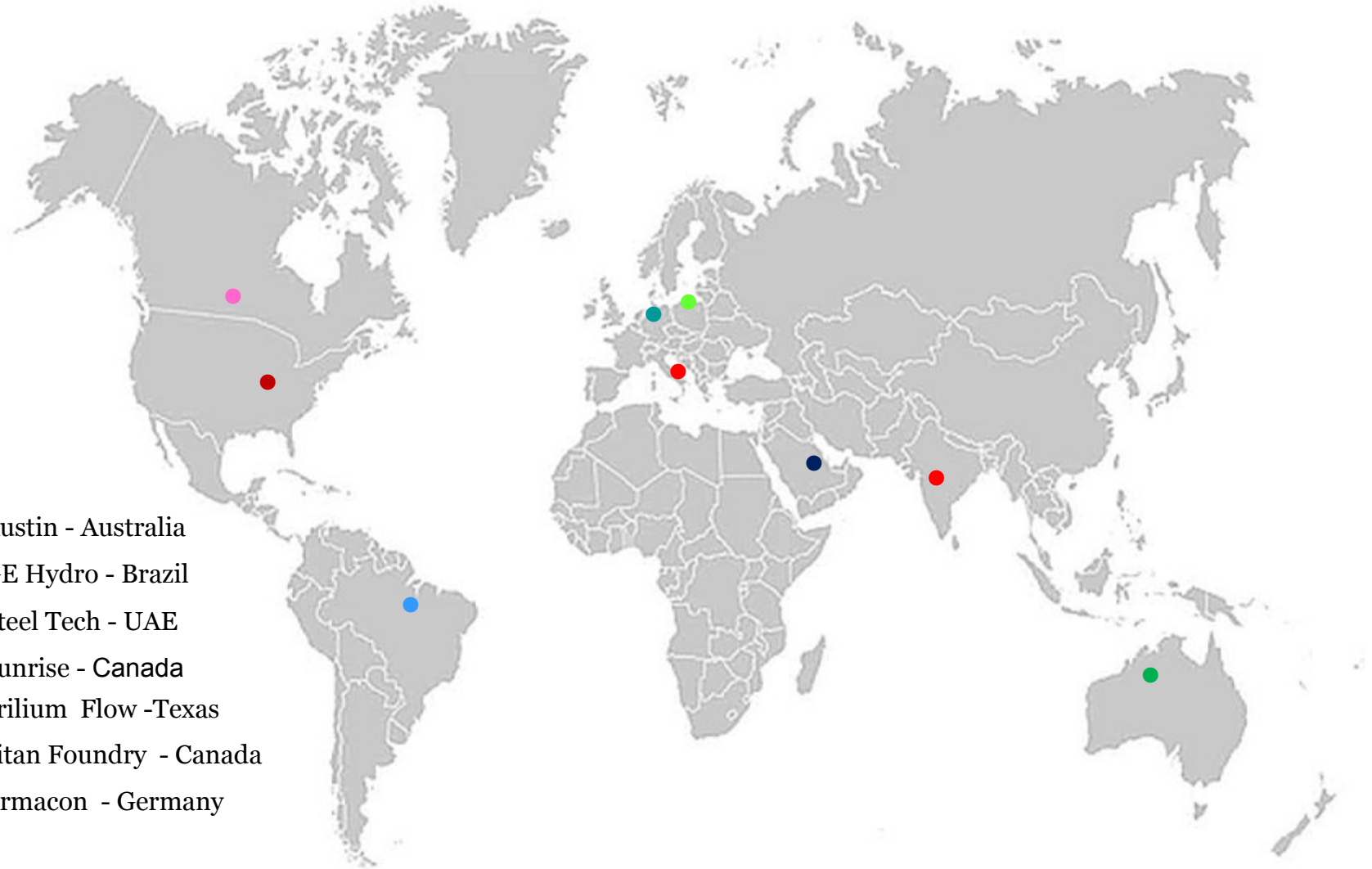
GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.



गोवा शिपयार्ड लिमिटेड
GOA SHIPYARD LTD



World wide presence



- Austin - Australia
- GE Hydro - Brazil
- Steel Tech - UAE
- Sunrise - Canada
- Trilium Flow - Texas
- Titan Foundry - Canada
- Armacon - Germany



KPML's – Foundry Division commitment to quality & delivery has been appreciated by customers over the years



KPML's – Foundry Division commitment to quality & delivery has been appreciated by customers over the years

Customer Recognition



Business Partner Score Card (SQMS)

THE KOLHAPUR STEEL LTD.

Overall Rating



KPML's – Foundry Division commitment to quality & delivery has been appreciated by customers over the years



SUPPLIER QUALITY RATING CERTIFICATE



Vendor Name: **M/s THE KOLHAPUR STEEL LIMITED**

Vendor Code: **100385**



This is to certify the supplier has achieved the overall quality rating of **93.0%** for the period of **FY 2023-2024**.

Supply Category	Total parts Supplied	Total No of Rejections	No of Non-conformity	Credibility rating	Quality Category
Class 'A'	80	2	4	8	A

Definitions:

- ❖ Class 'A' – Critical part, Class 'B' – Non-critical bought-out part, Class 'C' – Standard parts readily available / low value non-critical bought-out part
- ❖ Credibility rating – Arrived based on openness, transparency, genuineness of inspection records, corrective actions against quality errors and continual improvement (Scale of 1-10 / 1 – least and 10- Best)
- ❖ Quality Category – Grade A,B,C [A- Top rating (>90), B- Average rating (80~90) and C- Needs improvement (<80)]
- ❖ Overall Quality Rating % [Rejection "0" (40%) + NC "0" (40%) + CR "10" (20%) = 100%]

Date: **01.07.2024**


Quality Assurance Assistant Director

KOBELCO INDUSTRIAL MACHINERY INDIA PRIVATE LIMITED, KANCHIPURAM

KPML's – Foundry Division commitment to quality & delivery has been appreciated by customers over the years

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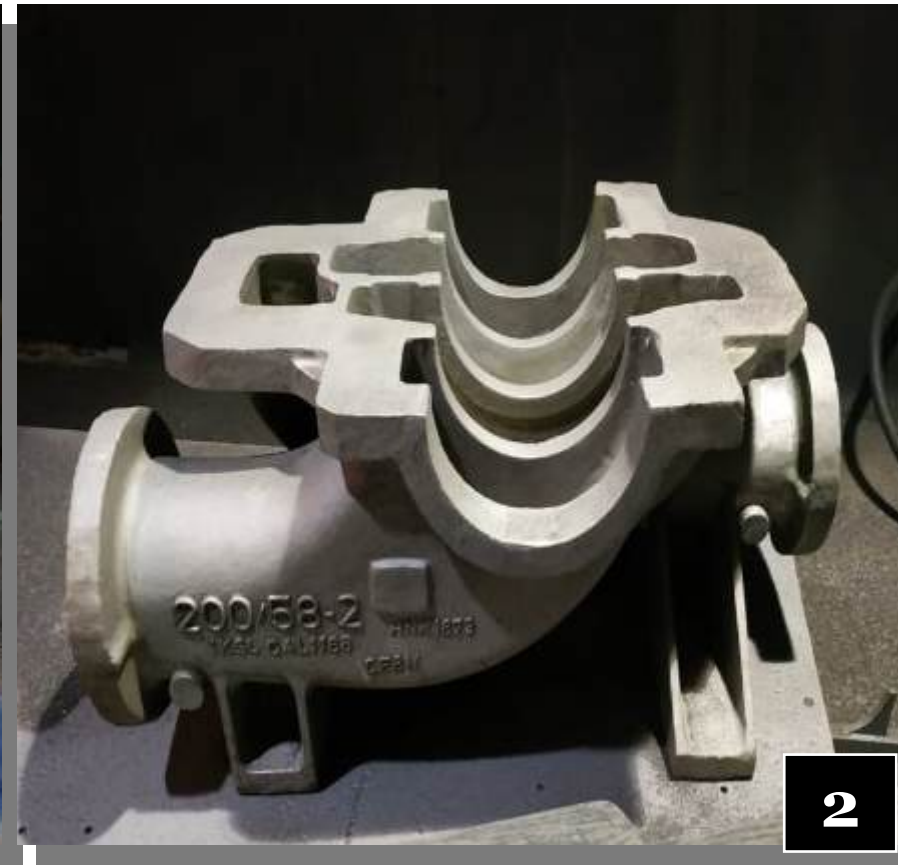
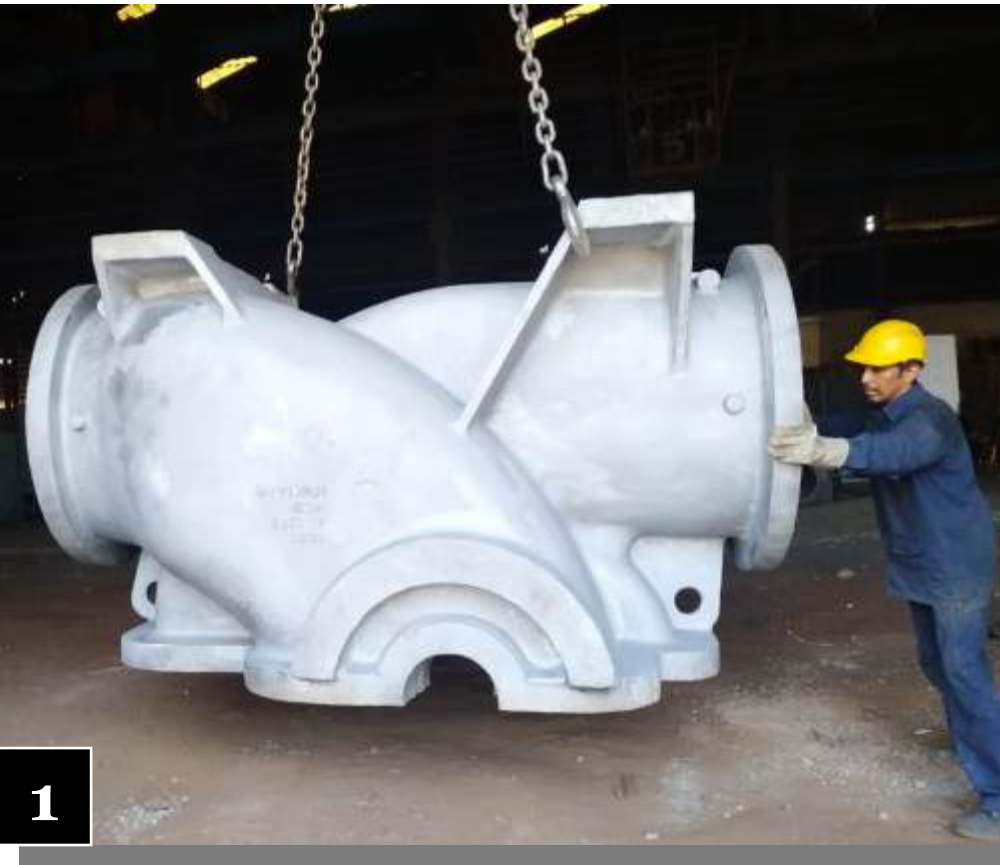
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Casting Details:

1. HDR Casing

- Weight: 7025 kg
- Material Grade: WCB

2. SCT 200/58

- Weight: 930 kg
- Material Grade: CF8M



1. HDR Casing

- Weight: 11070kg
- Material Grade: WCB



2. 600x400 Casing

- Weight: 6870 kg
- Material Grade: LC3

Pump Casing & Impeller



.1. MF Casing 40/45

- Weight: 1080kg
- Material Grade: CF8M



2. Impeller 650-570C

- Weight: 270 kg
- Material Grade: 1B

Pump Impellers



Impeller Details:

1. 1800-1570C
 - Weight: 2010 kg
 - Material Grade: 1B



2. Impeller BMF
 - Weight: 6805 kg
 - Material Grade: CF8M

Pump Impellers & Bowl



1. Impeller HDR 700-590A
- Weight: 240 kg
 - Material Grade: 1B



- 2. Bowl BHR 105:**
Weight: 1748 kg
Material Grade: WCB

Pump Bowl & Bell Mouth



Bowl BHR 195:
Weight: 10800 kg
Material Grade: WCB



Bell Mouth BHR 105
Weight: 1305 kg
Material Grade: WCB

Valve Body and Disc (Slide 1 of 2)



1. Gate Valve Body & Bonnet

- Body Weight: 3200kg
- Bonnet Weight: 700kg
- Material Grade: WCB



2. Butterfly Valve Disc

- Weight: 1440 kg
- Material Grade: 4A

Valve Body (Slide 2 of 2)



1. Butterfly Valve Body
 - Weight: 3280 kg
 - Material Grade: WCB



2. Swing Check Valve Body
 - Weight: 1445 kg
 - Material Grade: 4A

Hydro Turbine-Pelton and Francis Runner



1. Pelton Runner

- Weight: 3245 kg
- Material Grade: CA6NM



2. Francis Runner

- Weight: 3635 kg
- Material Grade: CA6NM



1. Guide Vanes

- Weight: 1305 kg (Finish Machined)
- Material Grade: CA6NM



2. KAPLAN BLADE

- Weight: 5424 kg (Hand Grounded)
- Material Grade: CA6NM

1



2



Casting Details:

1. Runner Crown

- Weight: 3937 kg (Finish Machined Weight)
- Material Grade: CA6NM

2. Runner Band

- Weight: 884 kg (Finish Machined Weight)
- Material Grade: CA6NM



Casting Details:

1. Guide Blade Carrier UP-LP

- Weight: 977 kg
- Proof Machined
- Material Grade: G17CrMo 55

Bearing and Trunnion Blocks



Bearing Block

- Weight: 6855 kg
- Material Grade: WCB

2. Trunnion Block

- Weight: 4995 kg
- Material Grade: WCB

3. Guide Bearing Shell

- Weight: 1400 kg
- Material Grade: WCB



1. ADAPTER LH -380-2432

- Weight: 389kg
- Material Grade: 1E4819 (MS)



2. ADAPTER RH Part No. 380-2433

- Weight: 389kg
- Material Grade: 1E4819 (MS)



TIP AS Part No. 458-0334

- Weight: 146 kg
- Material Grade: 1E4819 (MS)

CENTER CASE_

- Weight: 1100Kg
- Material Grade: MS

- Shutter Gate_NI –Resist Grade_Weight: 6520Kg



Pelton Runner using 3D Printed Mould and Core

Pelton Runner: the complete mold set including the cope, drag and 18 bucket cores, a total of **3,200 kg**, in silica sand and furan binder, were 3d printed in a matter of just **72 hours**.





BODY ROUGH -20-C2850SPL-GV-WCC-
WB06

- Weight: 5088 kg
- Material Grade: SA216 WCC/IBR



BODY ROUGH -16-C2500SPL-GV-WCC-
V382

- Weight: 2186 Kg
- Material Grade: SA216 WCC/IBR



HULK TORQUE TUBE GUTTER CASTING LARGE

- Weight: 2471 Kg
- Material Grade: IM 27



HULK UPPER GUTTER CASTING LARGE & SMALL

- Weight: 520 Kg (LARGE) & 354 Kg (SMALL)
- Material Grade: IM 27

Thank You



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