



**Cast Components for
Railways Locomotive & Coach
Axle Box Housing & Control Arm**

NATRAJ IRON & CASTINGS PRIVATE LIMITED

RDSO CLASS A , ISO 14001 FOUNDRY

TS 16949 CNC MACHINE SHOP

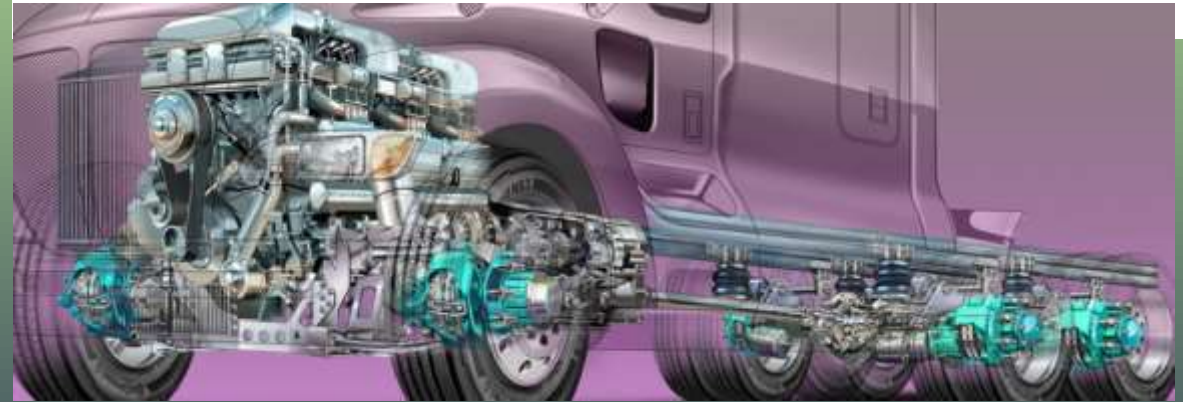
Works : Laikdih Chirkunda, Dhanbad, Jharkhand
Regional Office : H202 F ,1ST Floor Diamond Heritage
16 Strand Road, Opp Eastern Railway HQ, Kolkata

OVERVIEW OF THE PLANT





- **Introduction**
- **Business Verticals**
- **Milestone**
- **Sales Growth**
- **Plant & Infrastructure**
- **Approvals/ Certification**
- **Quality / Testing**
- **Machining Facilities**
- **Key Customers**



Company Introduction

- Natraj Iron and Castings (NIC) part of Rs 250 crore (USD 30 Million) Natraj Group with presence in Foundry, Concrete Castings, Mining and Fabrication spread over 3 states and employing over 1000 people.
- All the Companies of Natraj Group are Debt Free Cash Rich and Willing to Invest on behalf of the Customer to grow together.
- **Marketing Office – Kolkata Plant – Chirkunda, Dhanbad, Jharkhand**
- **Website - www.natrajcastings.com**
- **12 Acre Campus with 3 Acre Machine shop with 10 MW Electricity Connection**
- Natraj Iron and Castings (NIC) is IATF 16949, ISO 9001, ISO 14001, OHSAS 45001 Indian Railways RDSO Class A, NTPC approved Foundry + Machine shop specializing in Large size Complex CNC Machined Parts & Complex Components.





Value Proposition

- Who we are

Natraj Iron is one of the top 10 cast component manufacturers of Indian Railways with supply of 1000 MT per month and having approval of 12 components.

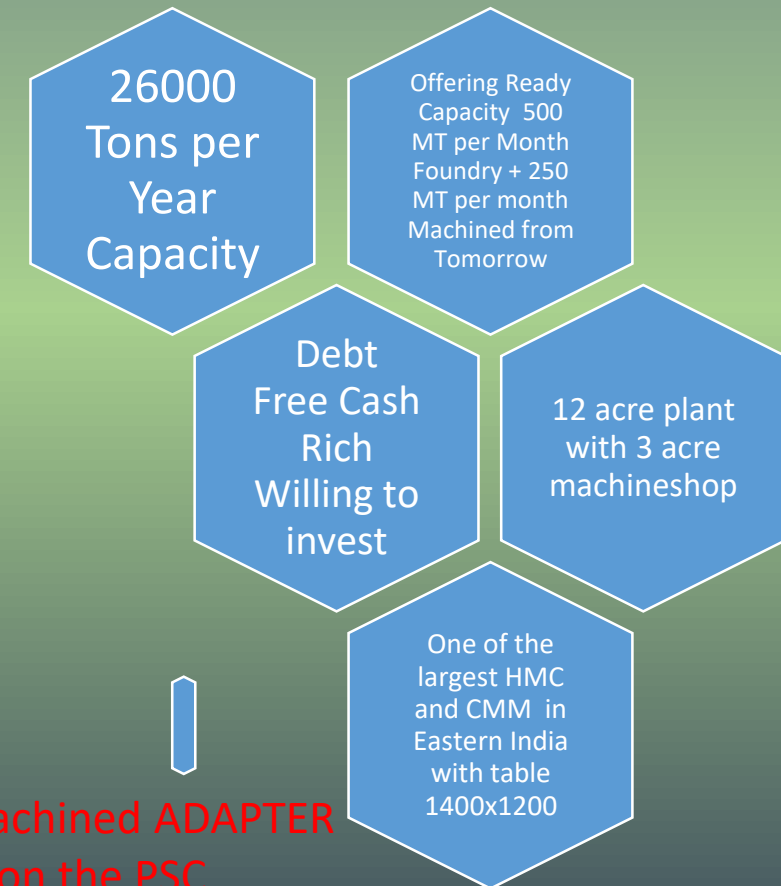
- What We Propose

Ready Capacity of 500MT per month finished CNC machined castings

Part of your Global Manufacturing Hub in India

WE WANT TO MAKE FOR YOU ENTIRE RANGE OF WAGON PARTS AND OPEN TO LOCO AND COACH PARTS AS WELL

DOMINATING PRESENCE IN INDIAN RAILWAYS



One in 5 Locomotive has our Axle Housing Casting, One in every 4 Wagon has our CNC machined ADAPTER and Each time you look down on the railway track 50% chance its our SGCI insert Casting on the PSC Concrete Sleeper

WHY NATRAJ AS YOUR VENDOR



Quickly Add Volume –Additional 500 MT castings per month and 250 MT MACHINED castings available IMMEDIATELY

Railways Vendors are very Lean. We survive and thrive on Volume with Quality with least price and we can pass on that benefit to you.



25 year Exp in DUCTILE IRON IATF and Tata Motors (Tier 2) vendor approved

Large Size parts FACTORY Fit for COMMERCIAL VEHICLES -TRUCKS AND TRACTORS.



PLANNING & DELIVERY

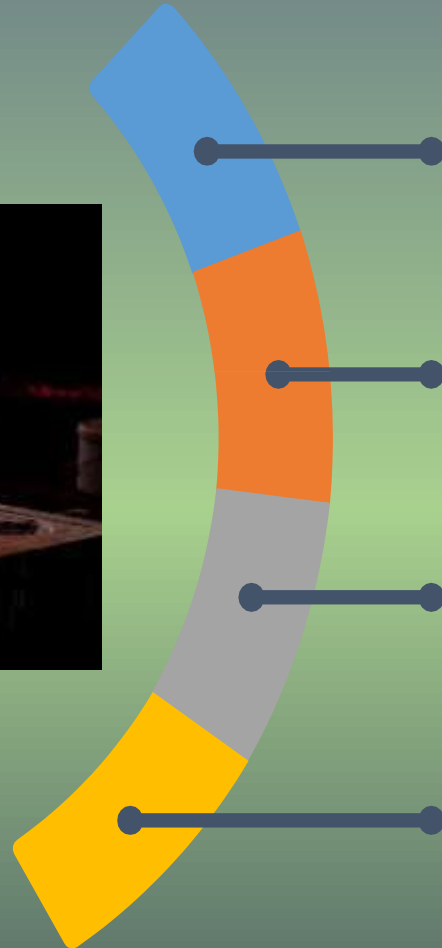
Quick Development and Fast Delivery.
EVERYTHING INHOUSE _ FETTLING AND FINISHED MACHINING INCLUDED

Solid Financials –Debt Free Cash Rich and Willing to Invest for YOU



Business Verticals Presence

Cast Solutions for Wide Variety of Industries



Railways- Complex parts for Locomotive and Coach and Wagon

Loco Axle box Housing, Coach Axle Box Housing, Control Arm, Centering Disc, SGCI Inserts for Concrete Sleepers, Adapter, Gear Box and Axle Housings

DI Pipe Fittings with ISI License and Valves & Couplings

DI Pipe Fittings and Valves for Water Projects. Upto 800 mm Valve and Fittings
Couplings for Water and Ash Line
Ash Handling Pipe Fittings for NTPC and Couplings

Automobile Castings (COMMERCIAL VEHICLES)

Clutch Housing, Brake Drum, Rear Hub, Front Hub, Steering Gear Box, Adaptor Plates, Flywheel Housing ,Various parts of Axles, Sleeve Yoke , Brackets

Transmission and Pump Components

Complex parts Transmission Bonfiglioli

26-30 Inch Pump Impellers for Export for KSB
200MT per month Agreement with Bonfiglioli for various Gearbox Housings

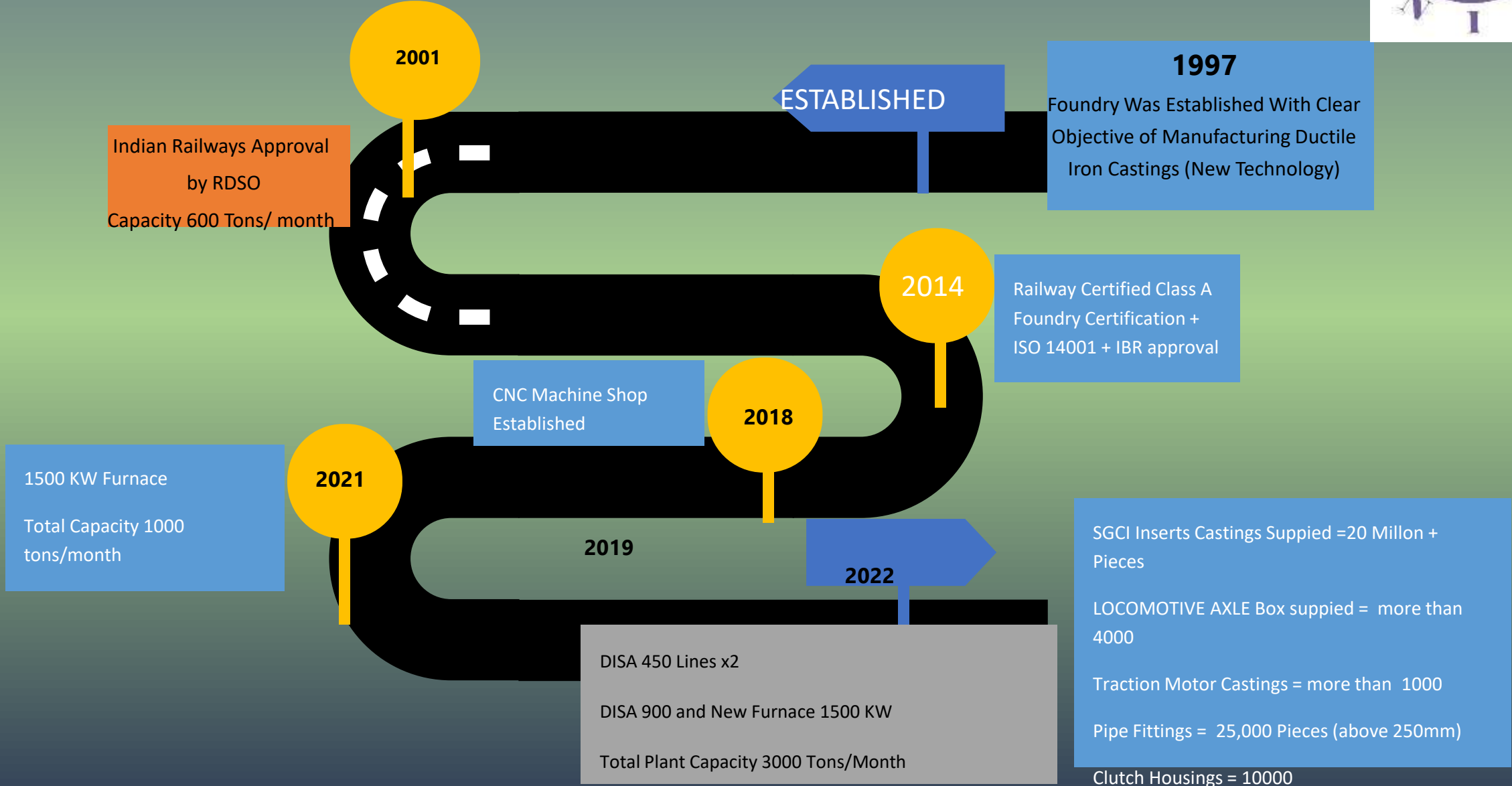
Sales Turnover

Robust Growth

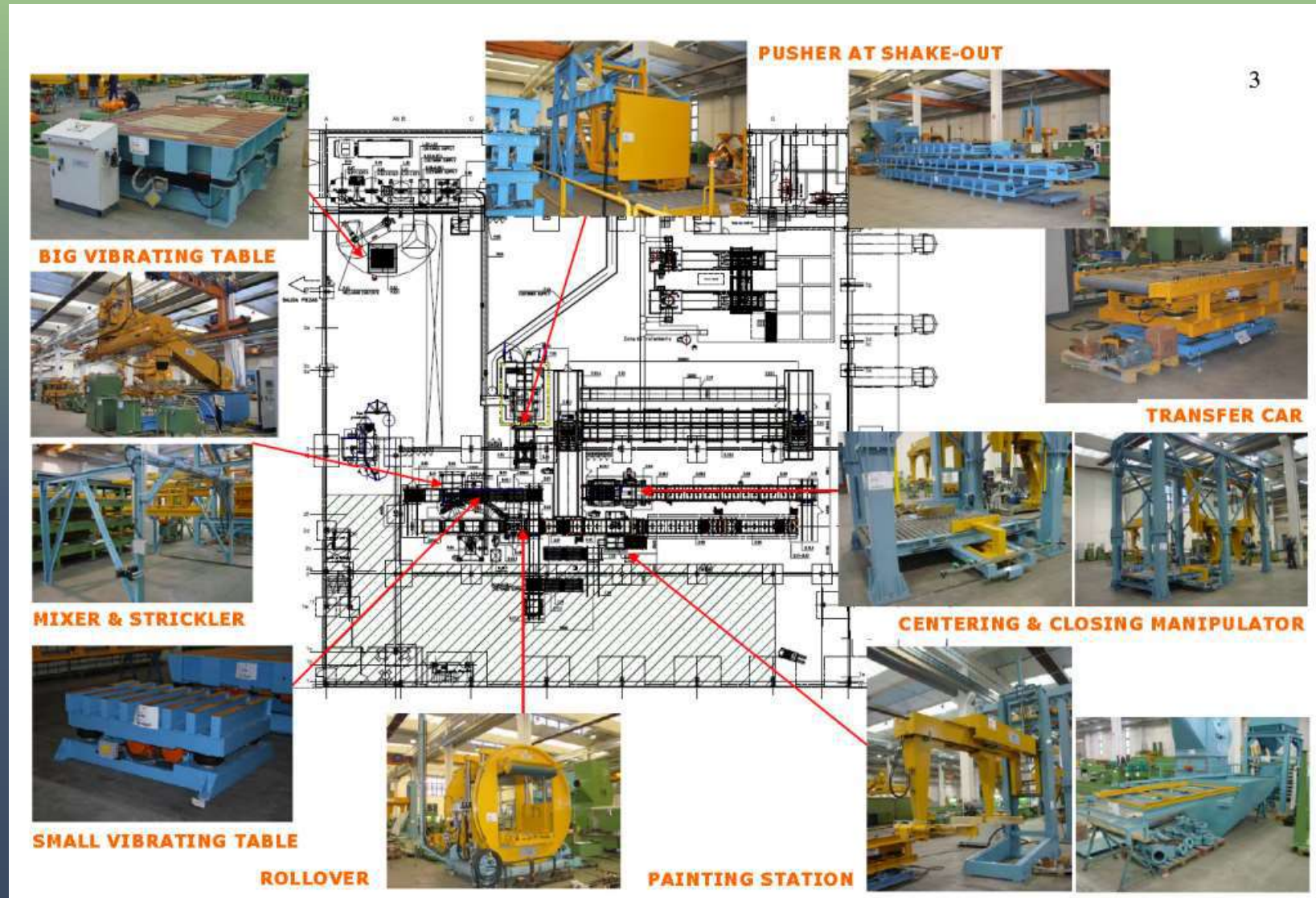


MILESTONES NIC

23 Years of Foundry Excellence



FUTURE INVESTMENT PLAN – COMPLETE NO-BAKE FLASKLESS MOULDING SYSTEM (UNDER COMMISSIONING)

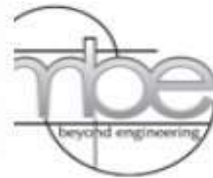


PRODUCTS INTEND TO DEVELOP - BOOGIE , COUPLER FOR RAILWAYS

KEY CUSTOMERS



KSB





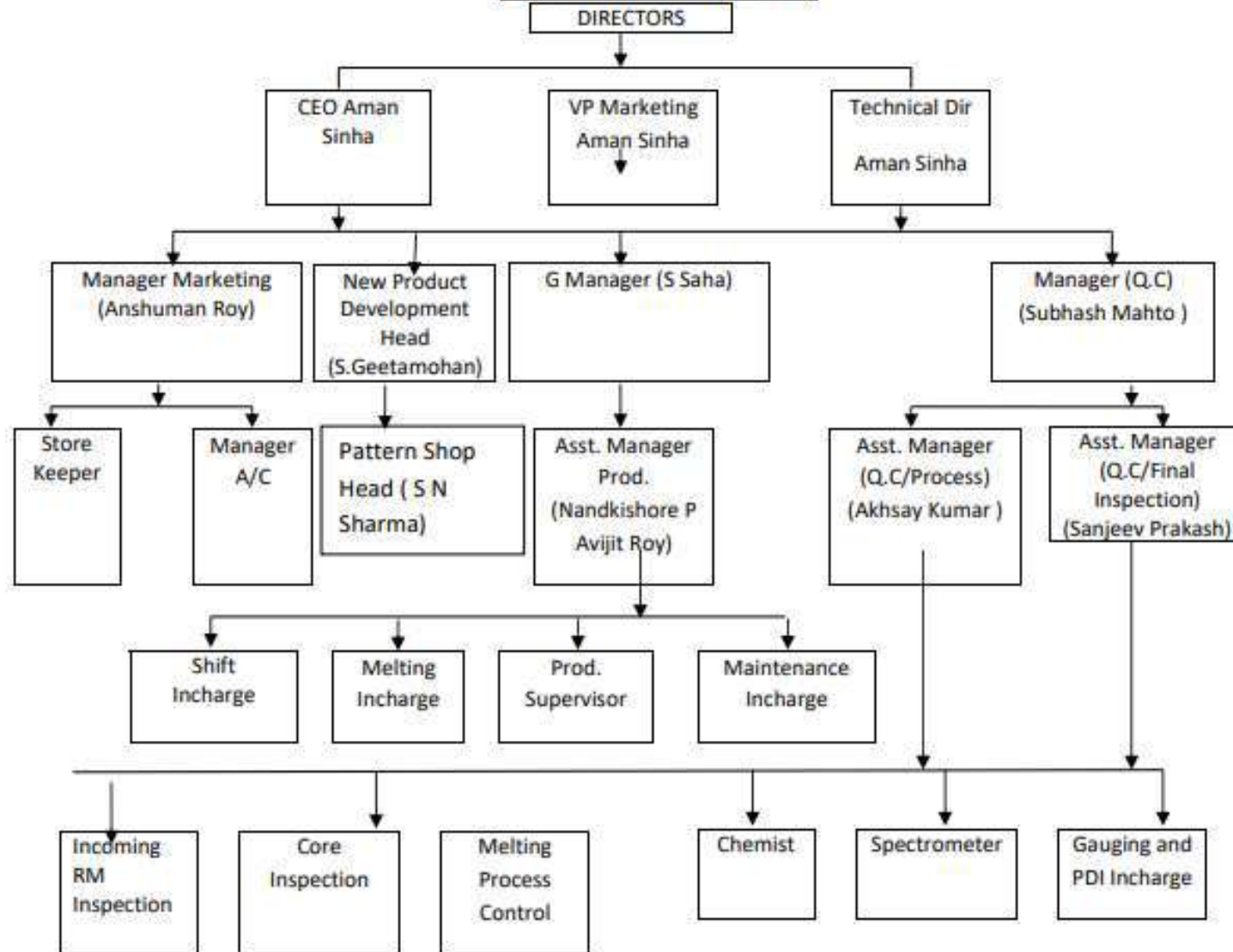
QUALITY CERTIFICATION



- ISO 9001
- ISO 14001 ENVIRONMENTAL
- ISO 45001 OHSAS
- **IATF 16949**
- **TATA MOTORS (TIER 2) Approved Vendor**
- BIS ISI LICENSE FOR DI PIPE FITTINGS
- IBR (INDIAN BOILER)
- RDSO CLASS A (INDIAN RAILWAYS)
- NTPC APPROVED
- RDSO APPROVAL FOR INSERTS/AXLE BOX/CONTROL ARM
- L&T APPROVED



ORGANISATION CHART



Infrastructure Summary – FOUNDRY 2200 MT /Month = 24000MTPA



State of the Art

01

DISA LINES

DISA 300 X 2
DISA 450 X 4
DISA 900 X 1
DISA SAND PLANT 40 MT/HR
DISA WHEELABRATOR SHOT BLASTING

02

INDUCTION FURNACES

1.5 MT – 1 NOS
2.0 MT – 2 NOS
3.0 MT – 3 NOS

03

BOX SIZES

1300 X 1100 X 400 / 500
1000 X 850 X 300
750 X 600 X 250
M/C MOULD – 1 KG TO 200 KG
HAND MOULD – 1 MT SINGLE PCS

04

METALLURGY

SG IRON
GREY IRON
STEEL GRADE

05

NDT TESTING

ULTRASONIC
RADIOGRAPHY
MAGNETIC PARTICLE TESTING
SUB ZERO TESTING

06

CHEMICAL & PHYSICAL LAB

SPECTROMETER
WET ANALYSIS AS PER IS GRADE
DIGITAL UTM WITH ASTM
COMPLIANT EXTENSIOMETER
DIGITAL HARDNESS TESTER
PORTABLE TESTER
CMM

07

MACHINE SHOP & IN-HOUSE PATTERN SHOP

BFW CNC VTL – 9 NOS
BFW VMC – 4 NOS
BFW HMC – 1 NOS
PLANOMILLER
SURFACE GRINDER
LATHE MACHINES – 20 NOS

08

PEOPLE TRAINED & EXPERIENCED

PHD – 2 NOS
ENGINEERS – 10 NOS
MASTERS – 2 NOS
DIPLOMA/DEGREE/GRAD – 10 NOS
CHEMISTS – 4 NOS

Infrastructure Summary - MACHINESHOP



01 →

CNC Machine shop built over 2 Acre Land having 9 VTL's , 3 VMC's and 1 HMC

02 →

Inhouse premachining setup over 1 acre with 30 machines

03 →

HMC BFW 8800 table 1200x1400 capable of doing 1 ton single piece machining

04 →

CMM of Accurate/Renishaw

05 →

Machining Capability of 500 MT per month being added by MAY 2025. Existing 400 MT per month

06 →

Machine shop is designed for CNC Machining of Medium & Big Size Parts 50 kg to 1 ton RANGE

07 →

Mass Production in Machining – not a jobbing approach

08 →

EXPERIENCED TEAM HAVING IMMENSE EXPERIENCE AND KNOWLEDGE

OVERVIEW OF THE MACHINESHOP



OVERVIEW OF THE MACHINESHOP



OVERVIEW OF THE MACHINESHOP



OVERVIEW OF THE MACHINESHOP



FOUNDRY 30,000 Tons Per Annum



MELTING

FURNACE 1 Crucible	2000kg x 2
Melt Rate	2 ton per hour SGCI 2.5 Tons per hour Grey 1.8 Tons per hour Steel
FURNACE 2 Crucible	2000kg x 2
Melt Rate	2 ton per hour SGCI 2.5 Tons per hour Grey 1.8 Tons per hour Steel
FURNACE 3 Crucible	3000 kg + 1500 Kg
Melt Rate	1.6 ton per hour SGCI 2 Tons per hour Grey 1.2 Tons per hour Steel

MOULDING

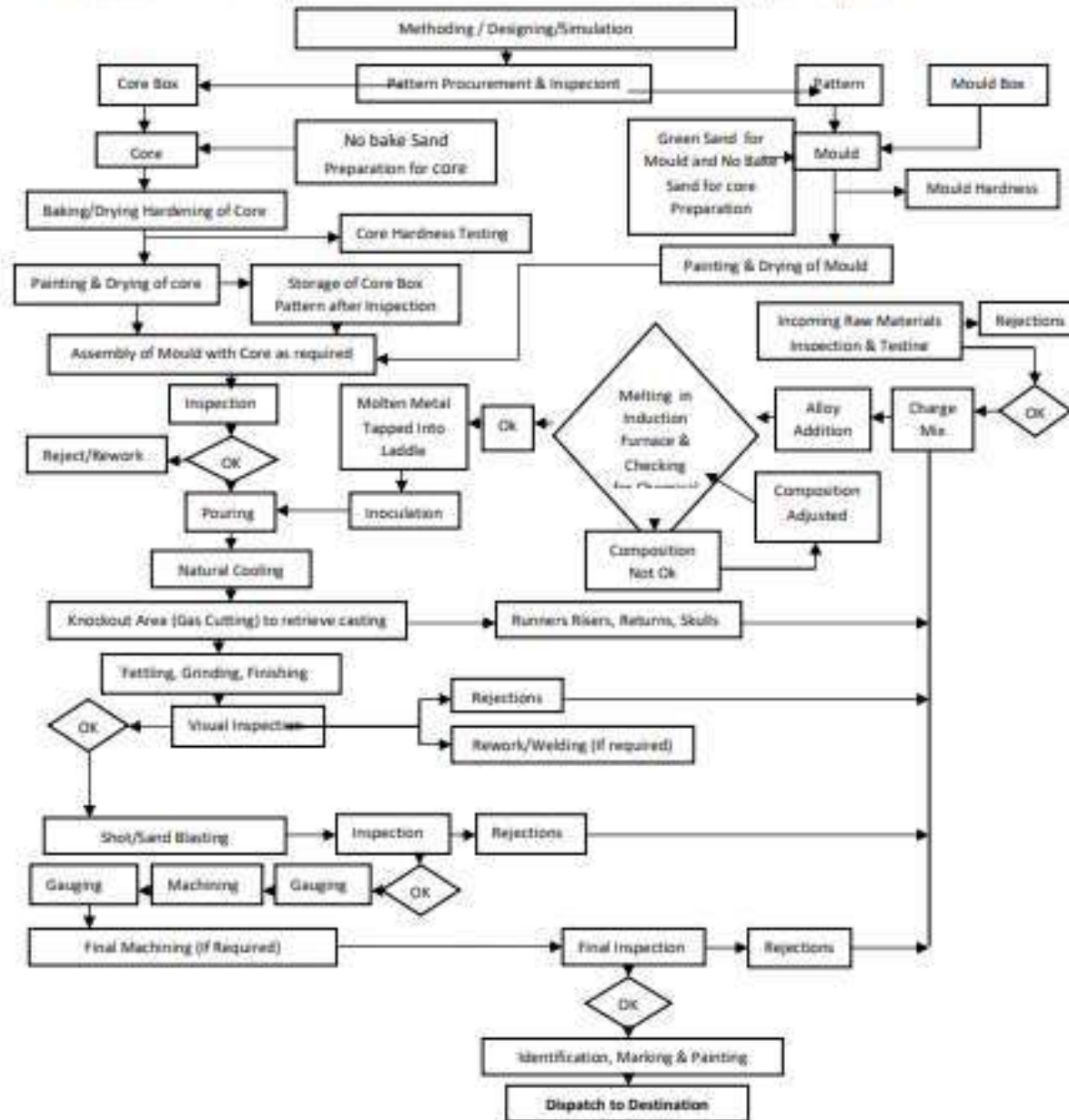
BOX SIZE	1400x1100x500/400 @ 5 Moulds / hour
Alternatively	1000x850x300/300 @ 10 Moulds/ hour
BOX SIZE	750x600x250/250@ 35 Moulds / hour
Auto MHS	750x600x250/250 @ 35 Mould / hour
BOX SIZE	650x560x100@ 35 Moulds / hour
DISA	TM190 Auto Mixture- 40 tons /hour 10 Tons per hour Sand Plant 10 Tons per hour Sand Plant

- **DISA 900 Moulding Line**
- **DISA 450 Moulding Line x4**
- **DISA Auto TM190 Sand Plant**
- **DISA Auto Shotblasting Setup**



PROCESS FLOW CHART OF MANUFACTURING PROCESS

Process Flow Chart indicating process of manufacture for an individual product, with quality control points.



SUPPORTING FACILITIES



- Pattern Shop
- Heat Treatment
- Core Shop

- Fettling

- Fully Inhouse with CNC
- Computerized Electrical Heat Treatment with graph plotting
- Cold Box Cores – COMPAX COMPACOR 3 table Rotary Automatic Machine and Custom Machine for 20 kg cores
- Oil Sand Cores and No Bake by Hand for Complex Castings

- DISA WHEELABRATOR AUTOMATIC Loop Line
- INDABRATOR 2 ton Table
- Swing Frame Grinders -5
- Table Top Grinders-16
- Hand Grinders 40





End to End Solution for Complex Cast Parts

- Natraj Iron is your go to vendor with everything under one ROOF.
- Casting Simulation to Fettling to Rough Machining to Finish CNC to CMM to Packing

* CMM ROOM UNDER CONSTRUCTION

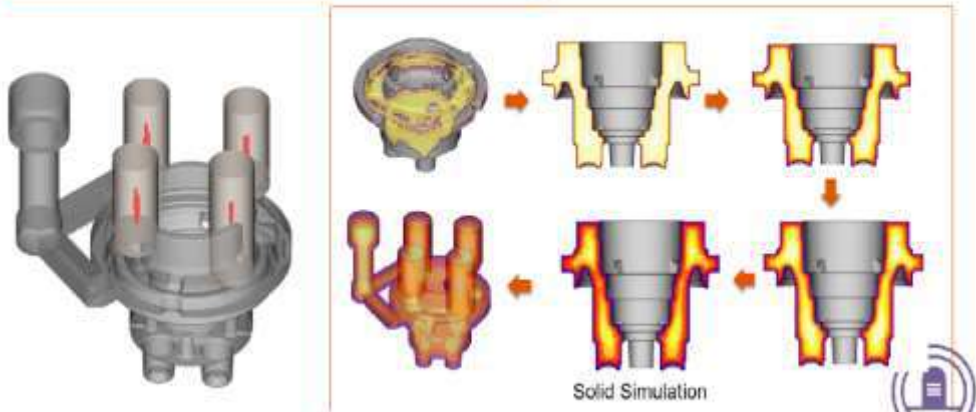


FEASIBILITY STUDY REPORT

Part Name : Flanged Hub (YF00000061)

SOLIDIFICATION DONE & SHOWN SHRINKAGE

Pouring temp : 1400-1420 ° C



EXPORT PACKING

Part Name : Flanged Hub (YF00000061)

Each part will individually protected by a Plastic bobbie wrapping and wedging. The Treated wooden packaging will be ISPM15 stamped fumigated wooden box (ISPM15) with 6 pcs **FLANGED HUB** fitted in one box. Size of Wooden Section will be 1 inch thickness Approx Box Dimension (Will be Confirmed later)

Packaging units have to be packed according to packaging lists

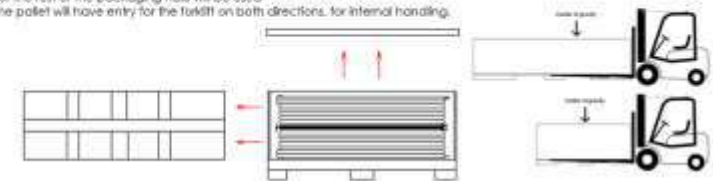
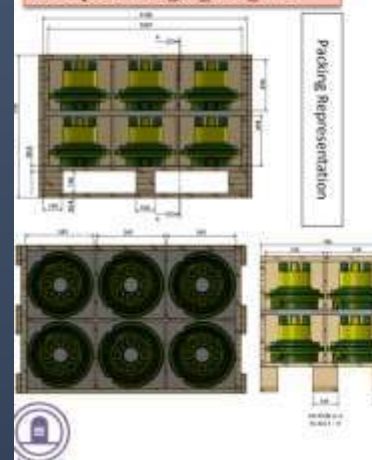
1) Basic Data

- Each unit will be shipped inside a wooden box plus appropriated film, sealed bag or cover to provide protection against sun, dust, water ingress, humidity (dry atmosphere) and shocks during sea transport, also a storage period up to 4 months after delivery.

2) Packing

- Packaging will allow stack ability of 4 or more boxes.
- The material will be in the assembly position.
- Spare parts, fasteners and other components will be delivered in a cardboard box inside the main packaging.
- The center of gravity will be indicated on the packaging.
- Lifting points for crane will be indicated.
- The opening of the box will be done by the top and by the front.
- The top and front covers will be fixed by screws or fasteners.
- For the rest of the packaging nails will be used.
- The pallet will have entry for the forklift on both directions, for internal handling.

Ref Spec : BTA_OI_08.8_AT.01



Grades we manufacture



- DUCTILE IRON CASTINGS (All grades as per IS 1865 and ASTM A532)
SG 500/7 , SG 450/10 ,SG 400/18 ,ASTM 550/6 ,SG 600/3
- GREY IRON CASTING (All grades of CI as per IS 210 FG 260 , FG 200
 - STEEL CASTINGS
IS 1030 , WCB, GS20MnV





Critical Parts Development and Mass supply

- AXLE BOX (AS CAST & MACHINED – FOR RAILWAYS)



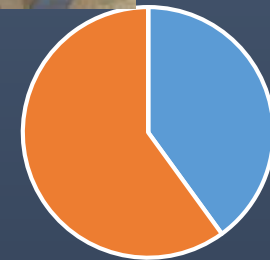
PARTNERED WITH SPECIAL ENGG AND INCREASE THEIR SUPPLY NUMBERS TO RAILWAYS FROM 5% TO 40%

Invested 3 Million USD to set up a Mechanized Line to Make Axle box Castings (130 kg) on Machine. First in India to make axle box on Machine.



■ SPECIAL ENGG ■ KHARAGPUR METALS

BEFORE NATRAJ IRON



■ SPECIAL ENGG ■ KHARAGPUR METALS

AFTER NATRAJ IRON

Critical Parts Development and Mass supply



- REAR & WHEEL HUBS (MACHINED – FOR COMMERCIAL VEHICLES)



Critical Parts Development and Mass supply



- BRAKE DRUMS(MACHINED – FOR COMMERCIAL VEHICLES)



Critical Parts Development and Mass supply

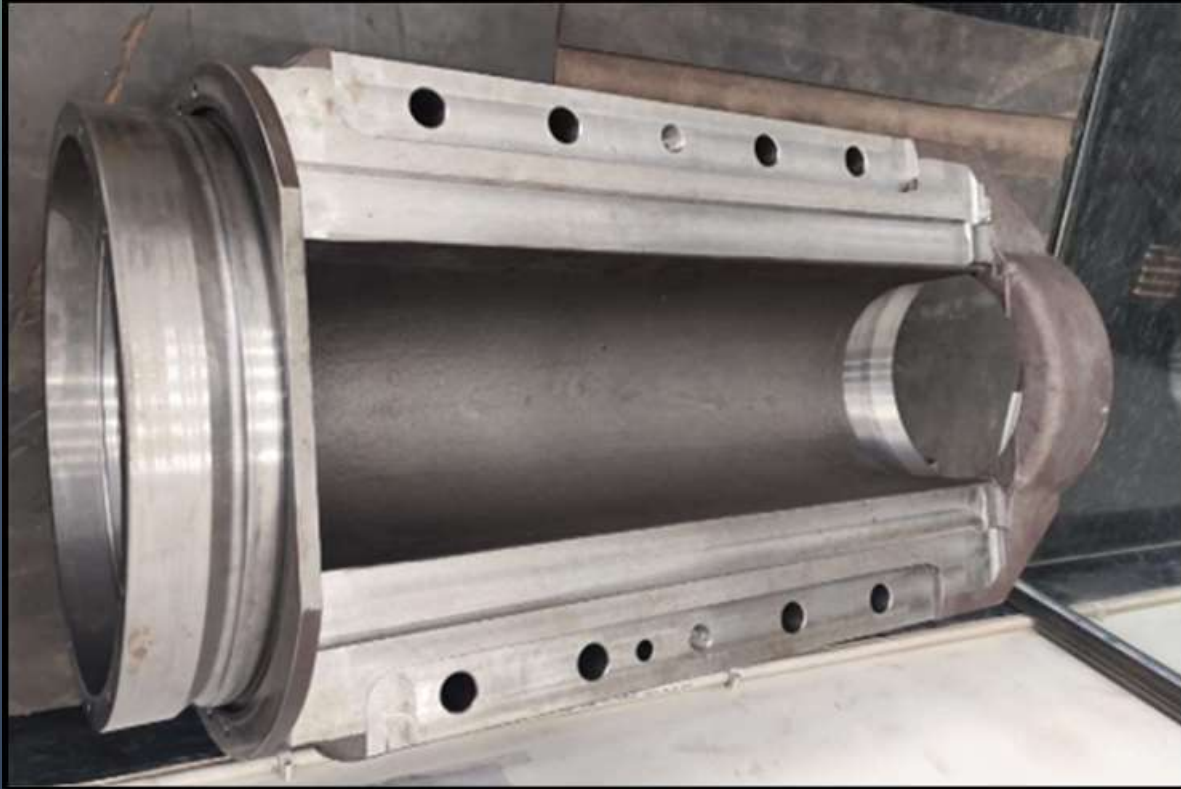
- CLUTCH HOUSINGS (AS CAST & MACHINED – FOR COMMERCIAL VEHICLES)



Critical Parts Development and Mass supply



- SUSPENSION TUBE(MACHINED – FOR RAILWAYS)



Critical Parts Development and Mass supply



- CONTROL ARM(MACHINED – FOR RAILWAYS)



OTHER RAILWAY PRODUCTS



- NARROW & WIDE JAW ADAPTORS(MACHINED – FOR RAILWAYS)



WE ARE THE LARGEST
SUPPLIER OF ADAPTORS
FOR RAILWAY WAGONS
IN INDIA (APPROX 23%
SHARE)

OTHER RAILWAY PRODUCTS



BRAKE SUPPORT



WHEEL SET GUIDE

OTHER RAILWAY PRODUCTS



END RINGS (MACHINED – FOR RAILWAYS)



OTHER MISCELLANEOUS PRODUCTS



HOUSINGS



HOUSINGS



INSULATOR CAP



PIPE FITTINGS



WATER BOX CASTINGS

QUALITY TESTING FACILITIES



- Spectrometer – 28 Elements
- Metallurgical Microscope with 500X Magnification and Advanced Software for Ductile Iron and Steel
- Railway Approved Wet Lab
- UTM Machine Computerized with ASTM Compliant Extensometer
- Digital hardness Tester and Portable hardness Tester
- Sub Zero Testing Setup
- Complete Range of NDT Testing including Ultrasonic, Radiographic, MPT, Dye Penetrant
- State of Art Green Sand Lab
- Hydro Testing Facilities
- Surface Plate and Height Gauges
- Bore Gauges and Vernier upto 1200mm
- Profile Projector with Broaching M/c





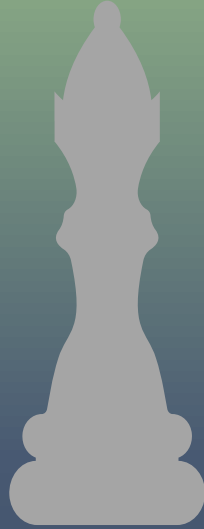
Choose NATRAJ – Smart Move



30000 TPA Foundry + CNC Machinshop in 3 Acre

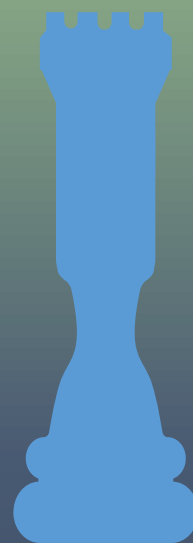


IMMEDIATEY RAMP UP CAPACITY – We are ready for YOU



DISA Plant + Railways RDSO Class A Foundry + IATF + AUTOMOTIVE EXP

Mass Production of Large Components



Debt Free and Cash Willing to Invest for



30000 Tons per Annum

Offering Ready Capacity 500 MT per Month Foundry + 250 MT per month Machined from Tomorrow

Debt Free Cash Rich Willing to invest

12 acre plant with 3 acre machine shop

One of the largest HMCs in Eastern India with table 1400x1200



EXISTING CLINTELE

INDIAN RAILWAYS

- ADAPTER – NJA , WJA & NJA CLASS K
- ROTOR END RING (SKEL 4732 ALT 1) , END RING PLATE (SKEL 4739 ALT 1) , WHEEL SET GUIDE
- CENTERING DISC , INSERTS , STEEL AXLE BOX (T-0-2-602)
- FEW MORE ITEMS ARE IN DEVELOPMENT PROCESS LIKE CONTROL ARM, SGCI AXLE BOX,SUSPENSION TUBE, BRAKE SUPPORT

RSB UNIT I

- CLUTCH HOUSING 3701 – 120 MT
- CLUTCH HOUSING 3720 – 115 MT
- BRAKE DRUMS – 120 MT
- HUBS – 50 MT

SHAH HITECH AUTOALCAST

- BRAKE DRUM – 2000 PCS/MONTH (FULLY MACHINED)
- CLUTCH HOUSING – 1500 PCS/MONTH (FULLY MACHINED)

EEFCO METALS

- CLUTCH HOUSING 3701 – 100 MT
- TML BRAKE DRUM - 100 MT
- FRONT SPRING BRACKET (284632103301) – 20 MT

TATA MOTORS – TIER I SUPPLIERS



THANK YOU

Natraj Iron and Castings Pvt Ltd

www.natrajcastings.com

Regional Office – H202 F ,1ST Floor Diamond Heritage

16 Strand Road, Opp Eastern Railway HQ, Kolkata 70001

Aman Sinha 9801974101

Anshuman Roy 8210881448