



subhadra

M E T A L S P V T . L T D .



SUBHADRA METALS PVT LTD (SMPL) was established in the year 2000 as a non-ferrous foundry with a primary focus on marine propellers & stern gears. Since founding our institution, we have continuously worked at improving our manufacturing systems and processes to provide unique, innovative and high quality range of products for the shipping industry.

OUR UNMATCHED PRODUCT RANGE includes propeller, stern-gear, propeller shaft, coupling, gland housing, rubber cutlass bearing, fabricated rudder assembly, mechanical steering system, anchor, non-ferrous casting bush, cathode and anode with qualitative features like high corrosion / temperature resistance and high tensile strength.

Product Snapshot with material grade

- | | |
|---|--|
| 1. Inboard Eng Propeller up to 2.5mtrs. | 1. Manganese Bronze / Ni Al Bronze |
| 2. Stern Tube Assembly | 2. Brass / Mild Steel |
| 3. "P" Brackets | 3. Manganese Bronze / Ni-Al Bronze |
| 4. Outboard Eng Propellers | 4. Manganese Bronze / Ni Al Bronze |
| 5 . Inlet Strainer | 5. Gunmetal / Bronze |
| 6. Cooling Water Strainer | 6. Gunmetal / Bronze |
| 7. Anodes | 7. Zinc /Aluminum |
| 8 . Cutlass Bushes | 8. Brass / Phenolic |
| 9 . Tail Shafts | 9. SS 316 / SS 304 |
| 10. Intermediate shafts | 10. En8 |
| 11. Couplings | 11. Mild Steel/Forged Steel/Stainless Steel |
| 12 . Rudders | 12. Mild Steel / Stainless Steel |
| 13 . Casted Rudder | 13. Manganese Bronze / Ni Al Bronze |
| 14 . Guffis | 14. SS 304/SS 316 |
| 15 . Pumps | 15. Ni Al Bronze / Lead Bronze / Phosporous Bronze |
| 16 . Valves | 16. Ni Al Bronze / Lead Bronze / Phosporous Bronze |

SMPL's Finished Propellers

**SMPL can manufacture Propellers upto 3 meters in Dia / 3 tons single finished product
Our foundry has the capacity of manufacturing 15 to 20 tons per month**



Stern Gear Assembly

SMPL can manufacture Stern Gear, Shaft upto Dia 250 mm and upto 6 - 7 meters in length



BILL OF MATERIAL						
SR. NO.	DESCRIPTION	DRAWING NO	SIZE	MATL	QTY	REMARK
1	PROPELLER CONE NUT		REFER DRG	BRASS	1	
2	TAIL SHAFT LOCKING WASHER		REFER DRG	S.S.	1	
3	TAIL SHAFT		REFER DRG	S.S. 304	1	
4	PROPELLER KEY		REFER DRG	BRASS	1	
5	AFT GLAND		REFER DRG	G.M.	1	
6	STERN TUBE		REFER DRG	BRASS	1	
7	FWD GLAND HOUSING		REFER DRG	G.M.	1	
8	GLAND COVER		REFER DRG	G.M.	1	
9	TAIL SHAFT COUPLING		REFER DRG	M.S.	1	
10	COUPLING KEY		REFER DRG	S.S.	2	
11	COUPLING NUT		REFER DRG	M.S.	2	
12	INTERMEDIATE SHAFT		REFER DRG	EN-8	1	
13	INTERMEDIATE SHAFT COUPLING		REFER DRG	M.S.	1	
14	CONE NUT SPANNER		REFER DRG	M.S.	1	
15	COUPLING SPANNER PIN		REFER DRG	EN-8	2	
16	BRASS SHELL CUTLESS RUBBER BUSH - FULL		-	BRASS/ RUBBER	1	
17	BRASS SHELL CUTLESS RUBBER BUSH - HALF		-	BRASS/ RUBBER	1	
18	STUD WITH NUT		-	SS	2	
19	GRUB SCREW FOR COUPLING		-	SS	2	
20	GRUB SCREW FOR KEY		-	SS	3	
21	GRUB SCREW FOR STERN TUBE		-	SS	4	
22	COUPLING BOLTS WITH NUTS		-	HIGH TENSILE	-	



Fabrication

Kort Nozzel



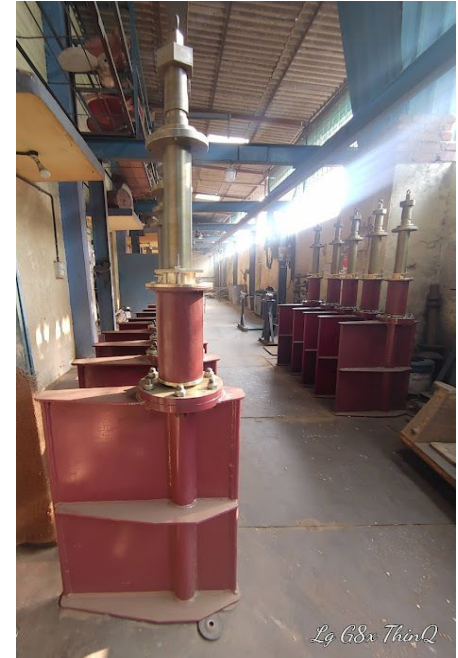
**23 mtr. ht. Crane Pedestal
with a Dia of 5 m / 45 mm
thickness plate**



Rudder



Rudder



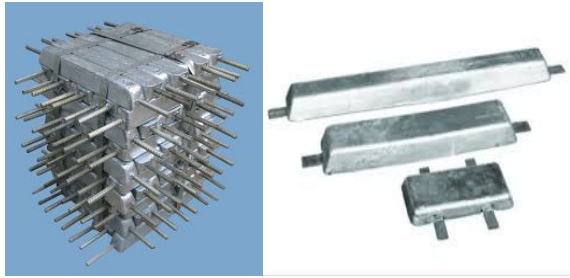
MS Fabricated Kort Nozzle – up to 2.8 mtrs



SMPL's Sacrificial Anodes - Zinc and Aluminum

SMPL can manufacture anodes as per the specifications and sizes from 2.0 kg onwards

Plated / Welded Anodes



Shaft Ball Anode



Rudder Anodes



Bolted Anodes



Shaft Nut Anode



Shaft Ring Anode



A Use Case of Our In-House Repair Facilities

Problem Statement:

SMPL received damaged CPP blades of an Indian Flag Vessel. Damages were caused due to suspected entanglement of wire ropes.

Our resolution:

We built up the damaged area by the process of butt welding. The propeller blade was delivered successfully with a time period of 7 days, which was ahead of the committed date of delivery.

SMPL's Propeller repair process (1 of 4)

SMPL's repair work done for Indian Coast Guard



SMPL's Propeller repair process (2 of 4)



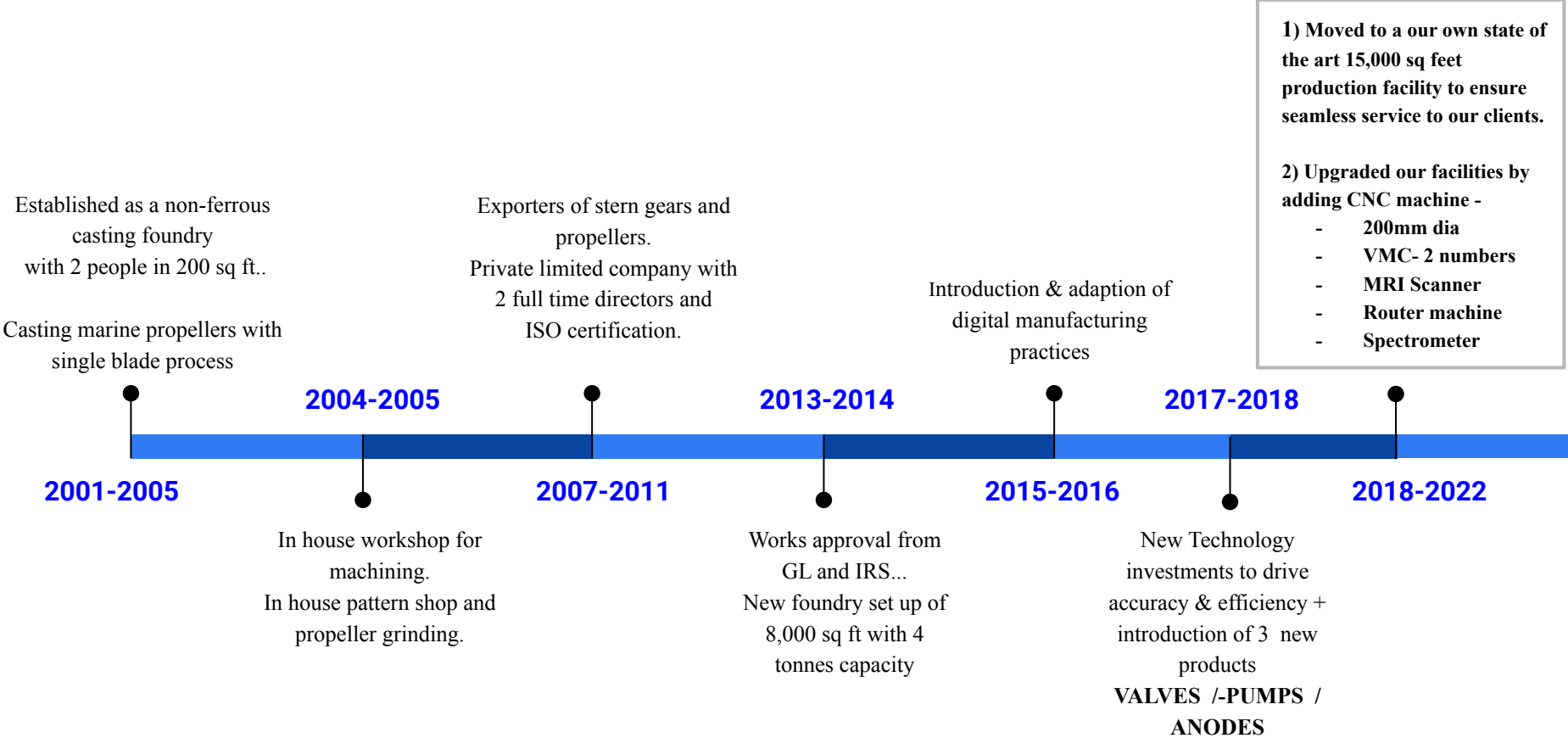
SMPL's Propeller repair process (3 of 4)



SMPL's Nickel Aluminum Bronze Propeller repair (4 of 4)

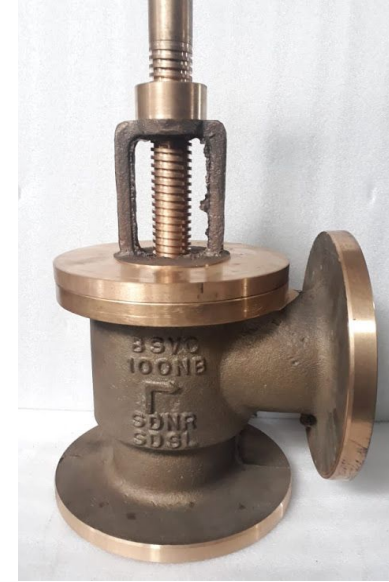


We Have Been Growing Rapidly from 2001 Onwards



Valves

SMPL has a capacity to undertake and execute orders as per your drawing/ sample in any specification from 5 Kg to 2000 Kg as single piece casting



DIN standards of following:

1. Phosphor bronze
2. Tin bronze
3. Leaded bronze
4. Aluminum bronze
5. Nickel aluminum bronze
6. Manganese bronze
7. Gunmetal
8. Brass

Valves

Globe Valve

SIZE 15mm to 300mm



GATE VALVE

SIZE 50mm to 300mm



BUTTERFLY VALVE

SIZE 25mm to 300mm

Pressure Class- 150 & 300



CHECK VALVE

SIZE- 15mm to 300mm. Pressure
Class-Nl:150 and others 150 and
300



Ball Valve- ½” to 12”



SDNR/SDSL Valve ½’ to 12’



Stairner



LG4C Valves for Coast Guard- 450/750 & 950 mm



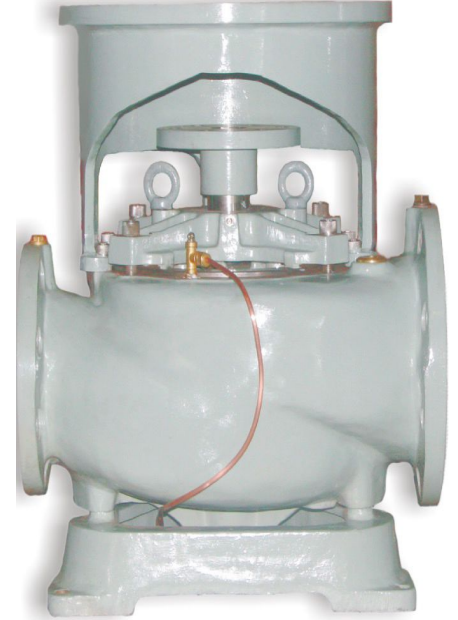
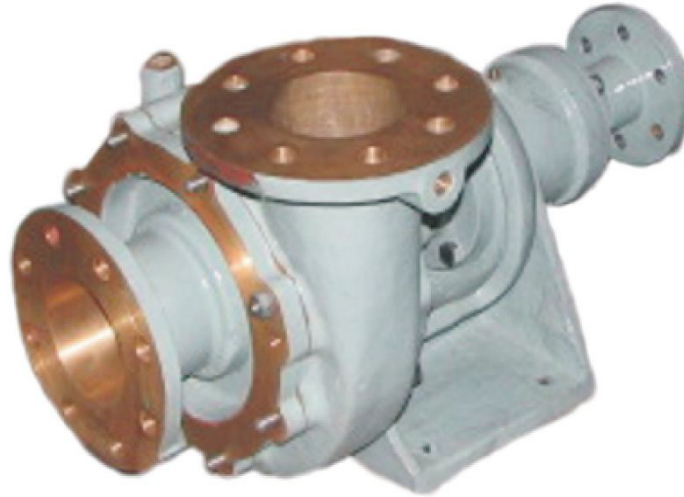
Ejector-

Nickel Aluminum Bronze, material, DN 400. SMPL can manufacture from 2" to 4", Range - DN 50 to DN 100



Centrifugal Marine Pumps & Equivalent Pump Spares

SMPL supplies pumps of various capacities to suit customers requirements



Furnace Capacity – 4 Tons Single Pouring



SMPL Acquired New Machineries in 2022 (1 of 5)

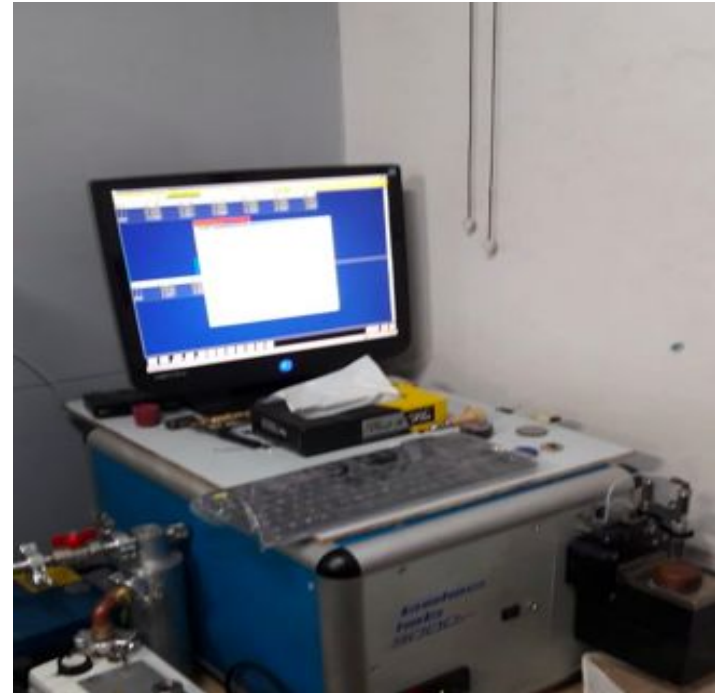
ROUTER MACHINE

Helps ensure 100% accuracy in pattern-making



SPECTROMETER

Used for in-house metal spectrographic analysis



SMPL Acquired New Machinery in 2022 (2 of 5)

MRI SCANNER

Used in propeller inspections, enabling accurate measurements of Pitch, Thickness, Blade Alignment, Rake & Skew and all other parameters, and dimensional checks of all other component like Shafts, Valves and other products manufactured



SMPL Acquired New Machinery in 2022 (3 of 5)

CNC # 1

We have introduced a TCP-H-400L



Make: TIRUPATI
Model: TCP-H-400L
Range: Spindle Bore 200mm,
Max turning length 1500mm
Siemens Controller

SMPL Acquired New Machinery in 2022 (4 of 5)

CNC # 2

We also introduced CNC DX 200/12B



Make: JYOTI

Model: DX 200/12B

Range: Spindle Bore 9mm, max
turning length 1200mm

Siemens 828D Controller

SMPL Acquired New Machinery in 2022 (5 of 5)

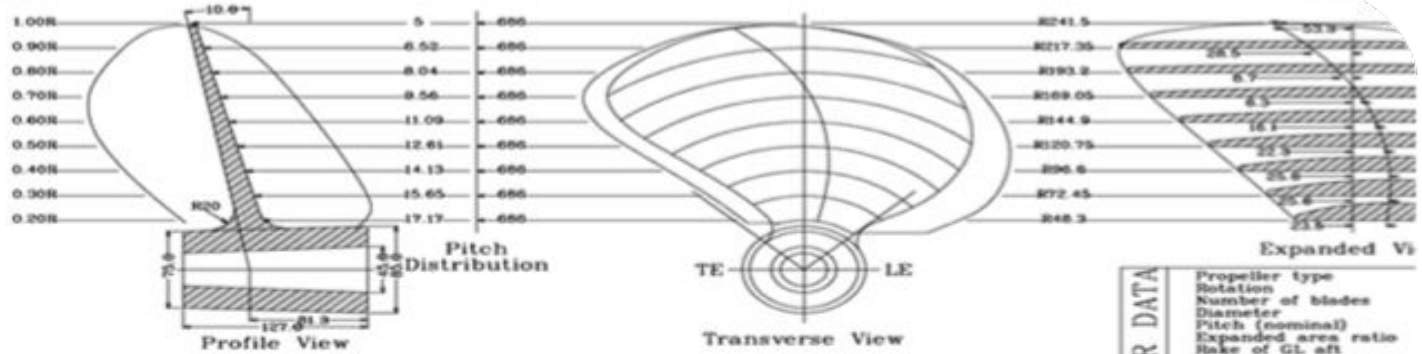
VMC

We have introduced a VMC 1016



Make: OT
Model: VMC 1016
Range: 1000mm x 500mm x
500mm
Mitsubishi Controller

Hydrocom Software



FOR APPROVAL ONLY
NOT FOR MANUFACTURING

PROPELLER DATA	Propeller type	
	Rotation	
	Number of blades	
	Diameter	
	Pitch (nominal)	
	Expanded area ratio	
	Rake of GL aft	
	Skew	
	Material type	
	Density	
	Design power	
	Design RPM	
	Thickness rule	
	Required $t \geq 0.25$	
	Weight	
	Mass moment of inert	
	Additional wetted iner	
#19" x 27" P = 4, 1.0 DAR		
DESIGNER	09/1927410	SCALE
TEAM BY	PC	DATE 15.08.200
APPROVED BY		SCALE

Hydrocom has been certified according to most professional standards. This is a
statement of approval by the industry of the general quality of the product and
not a guarantee of the accuracy of the product. The user is responsible for the
correct use of the product and the accuracy of the data.



PATRONUS
ENGINEERING SOLUTIONS

Our In-House Pattern Shop with Wooden and Aluminum Patterns



- **Patronus** is our key differentiator in this industry
- We employ industry expert pattern-makers who make wooden & aluminum patterns to ensure that we accurately meet your design needs. This also ensures our clients get a one-stop, end-to-end service for all their propeller & ancillary requirements
- Additionally, we are introducing router machines that will help us get more accuracy in our pattern to enable us to give our clients rejection free castings

Classification Approvals and ISO Accreditation



Facilities:

FOUNDRY WORKSHOP & ADMIN

**Plot No: 18 V.R.D.I. Complex ,
Garamlophap at post , Mazgaon , Tal- Khalapur ,
Dist Raigad - 410202
India.
Tel : +91 9930382263**

Email :

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Engineering : <mailto:engg@subhadra.co.in>
Accounts : <mailto:accounts@subhadra.co.in>
Logistics : <mailto:logistics@subhadra.co.in>
Foundry : <mailto:foundry@subhadra.co.in>**

REGISTERED ADDRESS

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We look forward to working with you



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