



BHARAT PUMPS & COMPRESSORS LIMITED

(A Government of India Enterprise)

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BPCL GSTIN No. 09AAACB9309A1ZA



Dated : 07.08.2020

Expression of Interest for Global OEMs for Manufacturing Partnerships under Make in India

BPCL is seeking manufacturing and technology partnerships with Global OEMs looking to establish or expand their supply chains/manufacturing base in India for the manufacture of various goods/or service business in India including centrifugal pumps, reciprocating pumps, mud pumps, reciprocating compressors, cementing units and their spare parts.

1.0 India Economic Opportunity

The Covid-19 pandemic is having a major threat impact on all economic activities, including manufacturing in most parts of the world. Supply chain disruptions in many sectors have been witnessed, the results of which shall become more pronounced in future. For a world that must quickly come to terms with the new normal, it is imperative that manufacturing activities are quickly resumed and ramped up, which would help restoration of normalcy and avoiding shortages that may adversely affect international economic recovery. A key lesson for businesses, emerging from the Covid-19 aftermath, is that the decentralizing of manufacturing will have to be adopted as a major strategy to mitigate disruption risks associated with concentrated and localized operations.

India being one of the fastest growing economies in the world, offers a wide range of opportunities. Government of India envisions India as a key engine of global growth, and is putting in place various supporting initiatives to make India a US\$ 5 trillion economy. BPCL is the sole Indian OEM (PSU) for manufacture of Pumps and Compressors would like to offer its state of the art manufacturing capacities and resources, for **forging long term partnerships in manufacturing of technology based critical equipment and systems with global OEMs.**

2.0 Overview of BPCL's Capabilities.

BPCL has played a pivotal role in shaping the engineering and manufacturing capability in India across several sectors, including Oil and Gas, nuclear power, fertilizers, steel plants etc. BPCL, is India's premier import substitution unit for manufacturing of sophisticated pumps and compressors catering especially to the needs of Oil and Gas industries including Refineries. The company manufactures wide range of Reciprocating –plunger pumps and mud pumps, Centrifugal pumps and Reciprocating compressors which form the back-bone of Oil & Gas industries. The company has also served Nuclear Power sector and has engineered, designed, manufactured and supplied various **Emergency core cooling system pumps (ECCS)** and

Primary pressurizing pumps (PPP) to Nuclear Power Corporation of India Ltd. against stiff international competition.

A brief overview of BPCL's core capabilities and strengths are detailed below.

a) **Manufacturing facilities:** BPCL is indigenously manufacturing high technology heavy duty centrifugal pumps, reciprocating pumps including plunger pumps and mud pumps and reciprocating compressors since almost last five decades. The pumps and compressors are manufactured to conform to international code such as API and are fully guaranteed for performance on the basis of proven and most updated design.

b) Machining facilities :

BPCL is well equipped with a wide range of sophisticated machines which can take up multifaceted areas/ranges of machining. All castings forgings required for manufacture of pumps and compressors are machined in BPCL works prior to assembly and testing of equipments. BPCL also has spare machining capacity for taking up outside machining jobs. A detailed list of machines available at BPCL works is as per **Annexure-I**.

c) Technology partnerships:

For manufacture and supply of its products, BPCL had entered into technical collaboration with following world renowned manufacturers and acquired the self reliance in manufacturing of above mentioned equipments.

- | | | |
|------------------------------|---|------------------------|
| 1. Reciprocating Pumps | : | Oil well , USA |
| 2. Centrifugal Pumps | : | Pompes Guinard, France |
| 3. Reciprocating Compressors | : | Nuove Pignone , Italy. |
| 4. Cementing Units | : | B.J Hughes, USA |
| 5. Nuclear Pumps | : | Pompes Guinard, France |

3.0 Areas of Partnership :

BPCL is actively seeking partnerships with global equipment manufacturing players looking to establish or expand their sourcing/manufacturing footprint in India. With extensive manufacturing facilities, experienced manpower, a government owned company, BPCL is ideally placed to be the partner in India for cooperation in various areas of manufacturing, servicing etc.

Some possible areas of partnership could be :

a) **Pumps & Compressors** : BPCL is a leading manufacturer of Pumps and Compressors required by OIL & Gas Industry , Nuclear Power , etc. BPCL has high synergy in manufacturing a wide range of equipments in this segment.

- b) **High Pressure Mud Pumps** : BPCL manufactured Mud pumps are installed required in RIGs for drilling operation in ONGC and OIL. BPCL may like to partner for manufacture of High Pressure Mud Pumps (7500 psi) .
- c) **Precision Machining Jobs** :- BPCL has state of art machining facility and spare capacity for same. BPCL would like to take up high precision machining jobs.
- d) **AMC and servicing of Pumps and Compressors** : Having supplied and installed large no of Pumps and Compressors to Oil & gas sector and nuclear power , BPCL Design/Service personnel are well equipped to take up AMC/Serving jobs at very competitive rates.

4.0 Models of Collaboration

BPCL is open to discussions for partnering WITH Global OEMS , interested organizations through a range of cooperation modes including but not limited to the following :-

- a. Joint Manufacturing
- b. Contract Manufacturing

Interested parties may send their Expression of Interest to the following address, latest by 31.08.2020.

Dy. GENERAL MANAGER (MARKETING)
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**LIST OF MACHINES & EQUIPMENT
PUMPS & COMPRESSORS**

Machine Shop (PCM) Bay No. :1

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Vertical Borer (BV-25 HEC)	Table Dia 2500 mm	01	1974-75
2	Horizontal Borer (Sacem) with digital readout	Spindle Dia 210 mm.	01	1987-88
3	Vertical Borer (Cooper)	Table Dia 1425 mm.	01	1984-85
4	Vertical Borer (Kirloskar)	Table Dia 1425 mm.	01	1974-75
5	Centre Lathe (LC-100) HEC	1000 Dia x 6500 mm	01	1976-77
6	Radial Drill (DR-8) HEC	75 Dia x 2500 mm	01	1975-76
7	Horizontal Borer (WD-160) SKODA	Spindle Dia 160 mm, Spindle Travel 1250 mm.	01	1975-76
8	Pedestal Grinder	25x300 mm.	01	1975-76
9	Horizontal Borer (BFT-125) WMW	Spindle dia 125 mm Spindle travel 1350 mm	01	1974-75
10	Horizontal Borer (AZ-11) HMT	Spindle dia 110 mm	01	1985-86
11	Horizontal Borer (BFT-125) WMW	Spindle dia 125 mm Spindle travel 1350 mm	01	1974-75
12	Honing Machine (Nagel)	600 mm	01	1975-76
13	Honing Machine (Nagel)	200 mm	01	1975-76
14	Cylindrical Grinder (BUA-63) TOS	630 Dia x 3500 mm	01	1976-77
15	Radial Drill (Garlic)	100 Dia x 3000 mm	01	1975-76
16	Radial drill (DR-8) HEC	80 Dia x 2500 mm	01	1975-76
17	Hydraulic Press (BEMCO)	25 T Cap.	01	1975-76
18	Pedestal Grinder	25 X 200 Dia	01	1973-74
19	Pedestal Grinder	35 X 500 Dia	01	1973-74
20	Compressor (2NBVT/4)		01	1975-76

21	Cross-Bay Trolley	10 T Cap.	02	1975-76
22	Jib Crane (SAMSON)	2 T Cap.	02	1975-76
23	E.O.T. Crane (Garlic)	15 T Cap.	01	1978-79
24	E.O.T. Crane (TAK)	15 T Cap.	02	1973-74
25	Plano Milling FP-20	1600 x 4000 mm	01	1974-75
26	Universal drilling machine (Portable)	60 Dia	01	1980-81
27	EOT Crane (Century Cranes)	30T/5T	01	2009-10

NEW MACHINES INSTALLED

1	CNC Horizontal borer (Floor Type)- Juaristi	Spindle Dia 200mm	01	2011-12
2	CNC Horizontal borer (Table Type)- Juaristi	Spindle Dia 150mm	01	2010-11
3	CNC Vertical borer Double Ram-HEC	Table Dia 3000mm	01	2012-13
4	CNC Vertical Turning Lathe-HMT	Table Dia 1500mm	02	2012-13

Light Machine Shop (PCM) Bay No. : 2

Sl No	Description of Machines & Equipments	Size	Qty	Year of installation
1	Centre Lathe NH-22	450 Dia x 3000 mm	01	1997-98
2	Centre Lathe NH-22	450 Dia x 1000 mm	01	2002-03
3	Centre Lathe (RIGITURN) Batliboi	430 Dia x 2500 mm	01	1973-74
4	Centre Lathe (LB-17) HMT	340 Dia x 1000 mm	01	1973-74
5	Universal Milling Machine (FN-2EU) HMT	Table Size 310 x1350 mm.	01	1974-75
6	Centre Lathe (Enterprise-1330) HMT	340 Dia X 1000 mm	01	1983-84
7	Turret Lathe (HMT)	Bar 63 mm Dia, Swing 237 mm	01	1973-74
8	Turret Lathe (9 C/30) Herbert	Bar 108 mm Dia, Swing 762 mm	01	1973-74
9	Centre Lathe (Vikram) HMT	450 Dia x 2000 mm	01	1982-83
10	Centre Lathe (RIGITURN) Batliboi	430 Dia x 2500 mm	01	1973-74

11	Centre Lathe (Bombay- Batliboi)	660 Dia x 2055 mm	01	1973-74
12	Centre Lathe (H-22) HMT	450 Dia x 2000 mm	01	1974-75
13	Centre Lathe (RIGITURN) Batliboi	430 Dia x 2500 mm	01	1973-74
14	Centre Lathe (Bombay-63) Batliboi	660 Dia x 3000 mm	01	1973-74
15	Centre Lathe (H-22) HMT	450 Dia x 2000 mm	01	1973-74
16	Centre Lathe (H-22) HMT	450 Dia x 2500 mm	01	1975-76
17	Horizontal Milling Machine (FN-2 H) HMT	Table size 300 x 1600 mm	01	1975-76
18	Universal Milling Machine (EM-3 U)	300 x 1600 mm	01	1973-74
20	Horizontal Milling Machine (FN-2H) HMT	Table size 310 x1350 mm	01	1975-76
21	Surface Grinder (HMT)	Table size 250 x 1000 mm	01	1972-73
22	Vertical Borer (Kirloskar)	Table Dia 1000 mm	01	1974-75
23	Horizontal Boring Machine (BH-100) HEC	Spindle Dia 100 mm	01	1975-76
24	Horizontal Boring Machine (WHN-13) VARNSDORF, CNC Controlled	Spindle Dia 130 mm	01	1979-80
25	Horizontal Boring Machine (CBH-100) Cooper, digital Controlled	Spindle Dia 100 mm	01	1985-86
26	Radial Drill (RM-62) HMT	50 mm Dia x 1500 mm	01	1976-77
27	Radial Drill (RM-62) HMT	50 mm Dia x 1500 mm	01	1976-77
28	Rough Grinder (Pedestal)	250 Dia x 500mm	01	1975-76
29	Rough Grinder (Pedestal)	50 x 400 mm	01	1975-76
30	Double Ended Bench Grinder	200mm x 700mm	01	1972-73
31	Pedestal Grinder	75 x 500 mm	01	1975-76
32	Hydraulic Press (BEMCO)	80 T	01	1975-76
33	Hydraulic Press (BEMCO)	63 T	01	1974-75
34	Hydraulic Press (BEMCO)	63 T	01	1974-75
35	Dynamic Balancing Machine	1600 Kg.	01	1980-81
36	Dynamic Balancing Machine	40 Kg.	01	1980-81
37	Oxygen Gas Cutting Machine	Plate Thickness 75 mm.	04	1977-78

38	Radial Drilling Machine (RM-63) HMT	50 Dia x 1790 mm	01	1976-77
39	E.O.T Crane – TAK	5 T Cap.	02	1973-74
40	Jib Crane (Samson)	1 T. cap.	03	1974-75
41	Jib Crane (NEI)	2 T cap.	03	1974-75
42	CNC Cylindrical Grinding Machine- HMT	550x3000	01	2009-10

Heat Treatment Shop (PCM) Bay No. : 3

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Hydraulic Press (Fluid Power)	80 T Cap.	01	1980-81
2	Pedestal Grinder (Glove)	25 mm Dia x 250 mm	01	1975-76
3	Electric Furnace (Double chamber Bagsvig)	600 x 1000 mm 1000 ⁰ C.	01	1977-78
4	Water & Oil Quenching Tank	1200 x 1000 mm.	01	1979-80
5	Normalizing Furnace (Circular Therlok)	500 mm Dia x 600 mm, 700 ⁰ C.	01	1979-80
6	Electric Furnace (Bagsvig)	500 Dia x 600 mm 1000 ⁰ C.	01	1976-77
7	Electric salt bath for cyaniding Furnace (Bagsvig)	600 Dia x 600 mm 1000 ⁰ C	01	1979-80
8	High speed Salt Bath Furnace (Bagsvig)	400 Dia x 600 mm 1400 ⁰ C.	01	1978-79
9	Salt Bath Furnace (Bagsvig)	1500 Dia x 1500 mm 650 ⁰ C.	01	1978-79
10	Ammonia Nitriding Furnace (Bagsvig)	1000 Dia x 4000 mm 520 ⁰ C.	01	1980-81
11	Oil & Water Quenching Tank (Hindustan)	2750 x 2750 mm x 4000 mm	01	1976-77
12	Electric Furnace (Bagsvig)	1600 x 2000 mm	01	1976-77
13	Electric Furnace (Bagsvig)	1500 Dia x 3500 mm 1000 ⁰ C.	01	1977-78

14	Shot Blasting Machine	Pitless chamber	01	1977-78
15	Rockwell Hardness testing Machine (Blue Star)	-	01	1976-77
16	BHN Hardness Testing machine (RAD-3000 KV) Blue Star	-	01	1973-74
17	Pedestal Grinder	25 x 200 Dia	01	1975-76

Fabrication Shop (PCM) Bay No. : 3

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Fly Press (Batliboi)	500 Kg.	01	1997-98
2	1800 W Electrode Drying Oven (Indarc)	250 ⁰ C.	01	1976-77
3	Oxygen Acetylene Gas Cutting Machine	(Trolley Mounted)	01	1975-76
4	C.I.Bed Plate (SKODA)	2000 x 1000 mm	03	1975-76
5	Marking Table (Plate) JASH	3000 x 2000	02	1975-76
6	DC Generator welding set (Kriloskar)	-	03	1975-76
7	Oxygen profile gas cutting machine VEBGDR	-	01	1976-77
8	Pedestal Grinder (GEC)	450 mm Dia x 75mm thick	01	1976-77
9	Band Saw Machine (Behringer)	340 x 440 mm	01	1989-90
10	Profile Gas Cutting Machine (Flotech-Essab)	-	01	1997-98
11	EOT Crane (TAK)	5 T cap.	01	1974-75
New Machine Tools				
1	Radial Drill Machine HEC	Drilling Capacity Dia 100mm	2	2008-09
2	Radial Drill Machine HMT	Drilling Capacity Dia 60mm	2	2008-09

Maintenance Shop (PCM) Bay No. : 4

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Centre Lathe (RL-R3 Batliboi)	660 x 4110 mm	01	1974-75
2	Centre Lathe (LB-17) HMT	340 Dia x 1500 mm	01	1974-75
3	Centre Lathe (H-22) HMT	225 Dia x 1000 mm	01	1974-75
4	Radial Drill (RM-65) HMT	50 Dia x 1750 mm	01	1974-75
5	Slotting Machine (CH-18) Cooper	Stroke 250 mm	01	1974-75
6	Universal grinder (G-17 U)	350 Dia x 860 mm	01	1974-75
7	Universal Milling (FN-2 EU) HMT	310 x 1350 mm	01	1977-78
8	Double ended Pedestal Grinder (Batliboi)	250 mm	01	1972-73
9	Electrode Drying Oven (INDARK)	-	01	1975-76
10	EOT Crane (TAK)	5 T Cap.	01	1974-75
11	Centre Lathe HMT	450x1500	02	2008-09
12	Centre Lathe HMT	450x2000	02	2008-09
13	Centre Lathe HMT	450x3000	01	2008-09
14	CNC Lathe SBCNC HMT	600X2000	03	2009-10

Tool Room (PCM) Bay No. : 4

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Centre Lathe (LB-17) HMT	340 Dia x 1000 mm	01	1973-74
2	Centre Lathe (LB-25) HMT	450 Dia x 1500 mm	01	1973-74
3	Centre Lathe (H-22) HMT	225 Dia x 1000 mm	01	1977-78
4	Milling Machine (FN-2 EH) HMT	310 x 1350 mm	01	1978-79
5	Radial Drill (RM-62) HMT)	50 Dia x 1500 mm	01	1974-75
6	Pliier Drill	40 mm Dia	01	1974-75
7	Drill Point Grinder (William Jacks)	80 mm dia	01	1974-75
8	Universal Grinder (G-17 U) HMT	350 Dia x 860n mm	01	1976-77

9	Surface Grinder (Harig)	250 x750 mm	01	1977-78
10	Pedestal Grinder (Globe)	300 mm Dia	01	1975-76
11	Bench Grinder (Double ended)	200 mm Dia	01	1973-74
12	Tool & Cutter Grinder (MTC-28) HMT	280 mm Dia	01	1980-81
13	3-Station Carbide Tool Grinding & lapping Machine	350 mm Dia	01	1977-78
14	Hand Press	500 Kg cap.	01	1973-74
15	Jig Boring Machine (WKV-100) SKODA	Table size 2000x 1000 mm Travel 1400 mm	01	1976-77
16	Centre Lathe (Bombay) Batliboi	660 Dia x 2055 mm	01	1976-77
17	Slotting Machine (CN-25) Cooper	Stroke 250 mm	01	1974-75
18	Universal Grinder (G-89 U) HMT	30 mm dia x 200 mm	01	1976-77
19	Milling Machine (FN-2H) HMT	310 x 1350 mm	01	2008-09
20	Milling Machine (FN-2V) HMT	310 x 1350 mm	01	2008-09

Machine Shop (PCM) Bay No : 4 & 5

Sl No	Description of Machines & Equipments	Size	Qty	Year of Installation
1	Centre Lathe (REGITURN) Batliboi	430 Dia x 2500 mm	01	1972-73
2	Centre Lathe (L-345) HMT	Dia 900 x 3000 mm	01	1974-75
3	Capstan Lathe (No-1 HERBERT)	25 mm Dia	01	1976-77
4	Turret Lathe (7B – HERBERT)	63 mm	01	1976-77
5	Turret lathe (No 9C/30 – HERBERT)	108 mm Dia	01	1976-77
6	Capstan Lathe (No. 4- HERBERT)	51 mm Dia	01	1976-77
7	Capstan lathe (No.4-HERBERT)	51 mm Dia	01	1976-77
8	Capstan lathe (No – 9C –HERBERT)	108 mm Dia	01	1976-77
9	Radial Drill (RM-65) HMT	50 Dia x 2350 mm	01	1982-83
10	Radial Drill (RM-63) HMT	50 Dia x 1790 mm	01	1982-83
11	Radial Drill (RM-63) HMT	50 Dia x 1790 mm	01	1982-83
12	Vertical Borer (Kriloskar)	1000 mm dia	01	1976-77
13	Vertical Borer (Kriloskar)	1425 mm Dia	01	1976-77

14	Vertical Borer (Kriloskar)	1200 mm dia	01	1984-85
15	Universal Grinder (G-22) HMT	450 Dia x 2075 mm	01	1976-77
16	Horizontal Borer (WHN-13) SKODA with Digital readout system	Spindle Dia 130 mm Spindle Travel 2000 mm	01	1981-82
17	Vertical Milling machine (FN-2 EV) HMT	310 x 1350 mm	01	1982-83
18	Horizontal Milling Machine (EN-3H) HMT	355 x 1600 mm	01	1978-79
19	Centre Lathe NH-22	450 Dia x 3000 mm	01	1983-84
20	Centre Lathe NH-22	450 Dia x 2000 mm	01	1983-84
21	Centre Lathe NH-22	450 Dia x 1500 mm	01	1983-84
22	NH-CNC Lathe	Dia 500 x 1350 mm	01	1984-85
23	EOT Crane	5 T cap.	02	1976-77
24	Centre lathe (H-22) HMT	225 Dia x 1000 mm	01	1975-76
25	ECNO CNC Lathe 26	-	01	1996-97
26	Thread Rolling Machine with accessories	-	01	1988-89

Spare Parts Manufacturing Shop (SPM) Bay No. : 5

Sl No	Description of Machines & Equipments	Size	Qty	Year of installation
1	Centre Lathe NH-22	Dia 450 x 2000 mm	02	1983-84
2	Centre Lathe NH-22	Dia 450 x 1000 mm	01	1983-84
3	Centre Lathe NH-22	Dia 450 x 3000 mm	01	1983-84
4	Centre Lathe (ENTERPRISE 1550)	380 Dia x 1500 mm	01	1982-83
5	Centre Lathe (Bombay -63) Batliboi	660 Dia x 3000 mm	01	1972-73
6	Centre Lathe (RL-R3) Kirloskar	520 Dia x 2280 mm	01	1972-73
7	Sand Blasting Machine	Chamber size 1000x900x700 mm	01	1971-72
8	Radial Drilling Machine (RM-63) HMT	50 Dia x 1790 mm	01	1982-83
9	Horizontal milling Machine (FN-2EH) HMT	310 x 1350 mm	01	1977-78
10	Jib Crane (Samson)	1 T Cap.	01	1977-78
11	Centre Lathe (REGITURN)	430 Dia x 2500 mm	01	1973-74

Fabrication Shop (PCP) Bay No. : 6

SI No	Description of Machines & Equipments	Size	Qty	Year of installation
1	1800 W Electrode Drying Oven (Indarc)	250 ⁰ C.	02	1976-77
2	Oxygen Acetylene Gas Cutting Machine	(Trolley Mounted)	01	1975-76
3	C.I.Bed Plate (SKODA)	2000 x2000 mm	01	1975-76
4	Marking Table (Plate) JASH	3000 x 2000	01	1975-76
5	Pedestal Grinder (GEC)	450 mm Dia x 75 mm Thk.	01	1976-77
6	EOT Crane (TAK)	5 T cap.	02	1979-80
7	Tig Welding Set	300 Amp. Welding rectifier, HF unit, Cooling unit, water cooled torch	01	1986-87
8	MIG Rectifier (400 MMR) INDARC	-	02	1983-84
9	SSR 600 Welding rectifier ESSAB	-	01	1995-96
10	Air Compressor (KHOSLA)	10 HP	01	1980-81
11	Tig Welding machine (BPT – 400) ESSAB	-	02	2003-04
12	C.I.Bed Plate (SKODA)	2000 x1000 mm	01	1975-76
13	C.I.Bed Plate (SKODA)	2000 x2000 mm	01	1975-76
14	Marking Table (Plate) JASH	3000 x 2000	01	1975-76
15	Fabricated Bed Plate	3000 x 1500	04	1975-76
16	Fabricated Bed Plate	4000 x 2500	01	1975-76
17	Drilling Machine HMT	-	01	1973-74
18	1800 W Electrode Drying Oven INDARC	250 ⁰ C.	02	1975-76
19	SSR 600 Welding rectifier ESSAB	-	01	1995-96
20	Welding Transformer double way INDARC	-	01	1975-76
21	Welding Generator ADVANI	450 Amps. (New)	02	1996-97
22	Welding Generator KIRLOSKAR	300 Amps (Old)	01	1975-76
23	Welding Generator KIRLOSKAR	300 Amps (Old)	03	1975-76
24	EPL Arc Welding Generator KANUBHAI	300 Amps.	01	1996-97
25	D.C. Generator Welding Set ADVANI	-	03	1975-76
26	Welding Generator (Inverter Type)	400 Amps.	05	2008-09
27	Profile gas cutting machine(CNC)		01	2009-10

