

BHEL::HYDERABAD				
M&S-P&C DEPARTMENT				
TENDER REF.M&S/P&C/2019/84				
NAME OF THE WORK:ASSISTANCE IN REPAIR OF FOUNDRY MACHINES IN 04,05 BLOCKS & PATTERN SHOP				
SCOPE OF WORK				
Sl.No	WORK DESCRIPTION	Unit	Qty	
	NON-FERROUS FOUNDRY & FETTLING SHOP			
	30Ton Annealing Furnace			
1	i) Butterfly gas valves cleaning	Nos	35	
	ii) Air valves cleaning	Nos	28	
	iii) HUDCO gas valves cleaning	Nos	42	
	iv) Pipeline Tar cleaning (12" dia)	metres	75	
	v) Pipeline Tar cleaning (6" dia)	metres	55	
	vi) Trolley wire rope annual replacement	metres	125	
	vii) Ceramic hole & trolley lining repair	Sq. mtrs	25	
	viii) Flue channel cleaning (Once/yr)	metres	12	
	ix) Door ceiling checking & replacement, if any	metres	25	
	x)Refractory activity removal & relining activity	Sq.Meters	44	
	Shot Blasting			
2	i) Rubber lining replacement (Once/yr)	metres	24	
	ii) pipeline cleaning (20" dia) (Thrice/yr)	metres	27	
	iii) Shots collecting chambers (4 Toms/yr)	Nos	3	
	iv) Shots conveyor belts repair & cleaning (3 Times/yr)	metres	26	
	Induction Furnace			
3	i) heat exchanger plates acid cleaning, Assembly (2 Times)	Nos	250	
	ii) Cooling Tower cleaning	No.of Occasions	3	
	iii) Coil cleaning [chemical] (3 Nos)	No.of Occasions	6	
	iv) Raw water & DM water tank cleaning	No.of Occasions	10	
	v) Bus bar trench cleaning from panel to furnace	No.of Occasions	15	
	Khandelwala Furnace			
4	i) Water tank cleaning (Once/yr)	Cu.metres	72	
	ii) Furnace pit cleaning (4 Times/yr)	Cu.metres	80	
	iii)Refractory activity removal & relining activity	Sq.Meters	41	
	Gas Fired Furnace			
5	i) Flue channel cleaning (1/2mx1m size)(Once/yr)	metres	150	
	Swing Frame Grinder			
6	i) Exhaust pipeline cleaning(20" dia)	metres	200	
	FERROUS FOUNDRY [04 BLOCK]			
	Induction Furnace			
7	i) in case of furnace coil repair or replacement, the furnace accessories such as hose pipes, power leads, shunts etc,[inclusive of the coil] need to be shifted to a distance of 0.5 KM	No.of Occasions	52	
	ii) In case of heat exchanger failure, the heat exchange plates need to be cleaned after pichling activity for which they need to be transported to a distance os 0.6 KM up and down.	No.of Occasions	100	
	iii) Cleaning of jammed non return valves of all the induction furnace.	Nos	250	

Sl.No	WORK DESCRIPTION	Unit	Qty	
	Continuous Core Sand mixers			
8	i) In case of replacement or repair of screws [approx. 4m length] they need to be dismantled and shifted to the 10Rs and again brought back to for refixing [approx. 1.5 KM up&down]	No.of Occasions	16	
	ii) The belt conveyor repair/replacement for CCSM No-3 when the conveyor need to be totally replaced by a new one, it has to be transported to a distance of 0.4 KM.	No.of Occasions	15	
	Sand Plant			
9	i) Repair/replacement of sand conveyors, both magnetic and non-magnetic [These conveyors are to be transported to a distance of 0.5 KM]	No.of Occasions	55	
	ii) Assistance to belt joint experts while making joints and fixing of new conveyors	No.of Occasions	19	
	iii) Removal of rotating table of the sand mixer for repair works, if any, to be transported to a distance of 0.3KM.	No.of Occasions	20	
	New Sand Plant [Liners Manufacture]			
10	i) Shifting of gear assembly along with accessories to a distance of 0.3KM	No.of Occasions	26	
	ii) Repair/replacement of sand conveyor attached to the machinery.	No.of Occasions	21	
	Spinners			
11	i) Belt conveyor replacement/repair of the centrifugal machine [0.3KM]	No.of Occasions	2	
	ii) Shifting of pipes, valves, spinner parts to a distance of 0.5KM.	No.of Occasions	7	
	iii) Replacement of damaged hose pipes for die cooling.	No.of Occasions	5	
	iv) Transport and replacement of gas pipelines [0.5Km] for die heating purpose.	No.of Occasions	5	
	Drying Ovens			
12	i) Removal and replacement of insulation material of quantity [10 Cu.m]	No.of Occasions	5	
	ii) Cleaning of gas pipelines and valves, with replacement activity as and when required.	No.of Occasions	15	
	Moulding Activities			
13	i) Removal and replacement of piston rings	No.of Occasions	15	
	ii) Lubrication and hose pipe replacement	No.of Occasions	25	
	iii) Replacement of piston	No.of Occasions	5	
	iv) Replacement of air valves	No.of Occasions	10	

Sl.No	WORK DESCRIPTION	Unit	Qty	
	Welding In Production			
14	i) Welding and cutting of angulars for supporting the cores in mould boxes	No of Occasion	25	
	ii)Cutting ,repair & weldiong of damaged parts of laddles	No of Occasion	9	
	iii)Furnaces Earths Probes Making and fixing[each furnace required 2 nos]	No of Occasion	11	
	iv)Repair of damaged furnaces spouts	No of Occasion	10	
	v)Continuos Core Sand Mixer Body Repairing Works	No of Occasion	12	
	vi)Core supports welding works	No of Occasion	55	
	vii)Excess metal removal from poured castings	No of Occasion	54	
	viii)Repair of damaged parts of sand plant or new sand plant	No of Occasion	12	
	ELECTRICAL MAINTENANCE WORK			
15	Replacement of Modular Range of Switches, ICTPS, Fuses, sockets etc- in RM Boards,MCB Boards:	Nos	78	
a	Routine preventive and electrical breakdown maintenance for pattern shop machineries (including cleaning & any replacement of contacsctors, fuses, starters, hose pieline).	Nos	78	
b	Including necessary replacement(contactors, connectors, relays, indication lamps,electrical switches, any spare parts in the control panel board etc.)	Nos	78	
16	CEILING FANS/MAN COOLER/Pedestal FANS/EXHAUST FANS			
a	Attending all break downs of fans such as suspension arrangement in the concrete/slab/roof members.,Fan box with MS hook (to be provided under civil works) . Replacement of double ball bearing type, copper wound motor complete with canopy, down rod,blades etc. Maintenace of fanS shall be provided with electronic regulator. Electronic Regulator shall be suitable for 240 volts A.C supply 50 Hz and shall be of continuous duty type	Nos	9	
b	Attending all break downs of mancoolers such as suspension arrangement in members., Replacement of double ball bearing type, copper wound motor complete with canopy, down rod,blades etc. Maintenace of fan shall be provided with DOL starter. DOL starter shall be suitable for 240 volts A.C supply 50 Hz and shall be of continuous duty type	Nos	32	
c	Attending all breakdowns of Exhaust fans [heavy-duty type with double ball bearing and conforming to IS standard]. Exhaust fan shall be complete with copper wound motor,capacitor, Louver/shutter, frame and mounting bracket. Exhaust fan shall be suitablefan operation on 240 volts single phase A.C supply.	Nos	3	

Sl.No	WORK DESCRIPTION	Unit	Qty	
17	Motors:-			
a	Periodic maintenance of AC/DC motor to be checked such as carbon brushes, commutator, terminal connection,DOL starters etc. for the machines.	Nos	25	
b	Motor wiring thoroughly checked.	Nos	25	
c	Replacement of fuse/breaker if it is blown off/tripped.	Nos	25	
18	Electrical insulated Rubber Matts			
	Rubber mats to be laid in front of all electrical MCB/RM Boards	Nos	14	
19	Providing Internal lighting			
a	The work include such as installing replacement of blown off bulbs/new bulbs and lamps, ballasts, adjusting, focusing or refocusing or operation of any permanent or temporary flood lighting systems, including parking lighting at entrance point/cabins/ shop floor area.	Nos	200	
20	Cleaning			
	a. All the distribution boards in shop floor area should be thoroughly clean including interior parts of MCB & RM board.	Nos	78	
	b.Storing of all electrical materials is to be kept clean and to be stored in an specified area as per BHEL Engineer instruction.	Nos	78	
21	Protection			
	a. All material and work shall be securely fastened so that it cannot be easily removed or stolen	Nos	25	
	b. All unused materials will be stored away in secured area.	Nos	25	
22	WELDING :			
	Welding on electrical works shall be done wherever it is necessary at the time preventive maintenace work.	Nos	25	
23	HANDLING MATERZAL:-			
	The handling and moving of all electrical material, equipment and apparatus shall be performed by whenever the machine is under break down/ periodic maintenace stage.	Nos	70	
	Total		3097	
Note: The quantities mentioned in the scope of work is indicative only and any other related works within the purview of the aforesaid scope need to be fulfilled.				