

BOQ		Doc No:	PE-PF-417-160-A001	
		Rev No:	0	
		Date of issue	09.06.2020	
NAME OF PROJECT:		5X800 MW YADADRI TPS		
NAME OF PACKAGE:		MILL REJECT SYSTEM (PNEUMATIC TYPE)		
TECHNICAL SPECIFICATION:		PE-TS-417-160-A001		
S. No.	DESCRIPTION	UNIT	QTY	HSN CODE
1.0	Total lump sum firm price for SUPPLY PART, SERVICE PART & MANDATORY SPARES comprising of design (i.e. Preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants and consumables required for pre-commissioning, commissioning, performance testing and till one year of operation after final handing over, mandatory spares along with spares for erection, startup and commissioning as required, forwarding, proper packing, shipment and delivery at site, unloading, handling, transportation & storage at site, in-site transportation, assembly, structural work, minor civil works, erection & commissioning, final painting at site, trial run at site, preparation of drawings and carrying out performance guarantee/Functional/Demonstration tests at site (As applicable), training of customer/client O&M staff and OPERATION AND MAINTENANCE SERVICE including manpower, supervision, consumables etc. for operation & maintenance of Mill Reject System for a duration of 15 unit months after commissioning of mill reject handling system for the scope defined as per technical specification & final handing over to end customer in flawless condition for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	Lot	1	
2.0	MAJOR BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE.			
2.1	Total lumpsum firm Prices for SUPPLY part comprising of design (i.e. preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants and consumables required for pre-commissioning, commissioning, performance testing and till one year of operation after final handing over, alongwith spares for erection, start-up and commissioning as required, forwarding, proper packing, shipment and delivery at site, preparation of drawings for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	Lot	1	8428 90 90
2.2	Total lumpsum firm prices for the SERVICES comprising of unloading, handling, transportation & storage at site, in site transportation, assembly, structural work, minor civil works, erection & commissioning, final painting at site, trial run at site, and carrying out performance guarantee/Functional/Demonstration tests at site (As applicable), training of customer /client O&M staff for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	Lot	1	998732
2.3	Total lumpsum firm price for Mandatory spares comprising of manufacture, fabrication, assembly, inspection / testing (as applicable) at vendor's & sub-vendor's works, painting, forwarding, proper packing, shipment, delivery at site & guarantee as per tender technical specification above, amendment & agreements till placement of order.	Lot	1	8431 39 90
2.4	Total lumpsum firm price inclusive of all prevailing taxes, duties and other levies for providing OPERATION AND MAINTENANCE SERVICE including manpower, supervision, consumables etc. for operation & maintenance of Mill Reject System for a duration of 15 unit months after commissioning of mill reject handling system & final handing over to end customer in flawless condition for the scope defined as per technical specification.	Unit Months	15	998871
Note: 1.) BOP to consider and suitably incorporate taxes, duties and other commercial aspects. 2.) Bidder to quote the Prices in 'figures' along with corresponding 'words'. 3) Lumpsum price quoted at Sl.no 1.0 shall be considered for evaluation. 4) For detailed scope of Operation and maintenance, technical specification (PE-TS-417-160-A001) to be referred. Any variation in no. of unit months shall be exercised based on unit rate arrived from price quoted against Sl.no 2.4 above. 5) Stage # 1 (Unit 1 &2) and Stage # 2 (Unit 3,4, & 5) billing break up for Supply, Erection and commissioning and mandatory spares shall be submitted by bidder based on finalised BOQ arrived during detail engineering.				
Particulars of bidder / authorised representative				
Name	Designation	Signature	Date	Company Seal

BOQ Main supply

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S. No.	DESCRIPTION	UNIT	QUANTITY		TOTAL
			STAGE#1	STAGE#2	QUANTITY
BREAK-UP OF SUPPLY PRICES GIVEN IN 2.1 OF MAIN SHEET.					
2.1.1	Lumpsum price of transporter vessel with dome/ butterfly/ vertical swing type valve, insert plates and accessories.	No.	16	24	
2.1.2	Lumpsum price of pyrite hopper with level probes, Tem. switch, rupture disc, metallic expansion bellow.	No.	16	24	
2.1.3	Lumpsum price of pneumatic panel/ air control module/ solenoid box and/or Junction box with accessories.	No.	16	24	
2.1.4	Lumpsum price of storage bunkers , pressure relief valves, bag filters with differential pressure transmitter, terminal boxes, level transmitters, chain pulley blocks, bunker discharge gate with accessories.	Sets	4	6	
2.1.5	Lumpsum price of air compressors with drive and instrumentation & flow transmitters etc.	No.	2	3	
2.1.6	Lumpsum price of microprocessor controllers of air compressors as loose supply in addition of microprocessor controllers mounted on compressors.	No.	2	3	
2.1.7*	Lumpsum price for skid mounted instruments of compressors as loose supply in addition to instruments already installed in compressors skids	Sets	2	3	
2.1.8	Lumpsum price of air receivers with accessories.	No.	4	6	
2.1.9	Lumpsum price of pipes for mill reject conveying.	Lot	2	3	
2.1.10	Lumpsum price of pipes for compressed air (instrument air and conveying air) & cooling water services, etc.	Lot	2	3	
2.1.11	Lumpsum price of air & water line valves.	Lot	2	3	
2.1.12	Lumpsum price of pneumatically operated knife gate valves.	No.	64	96	
2.1.13	Lumpsum price of Alloy CI bends/ fittings/ laterals.	Lot	2	3	
2.1.14	Lumpsum price of field instruments, cable glands & lugs, cable trays/ conduits (branch) as per specification requirement.	Lot	2	3	
2.1.15	Lumpsum price of fixed type sump pumps along with all its control.	Nos.	4	6	
2.1.16	Lumpsum price of portable sump pump along with all its control.	Nos.	1	1	
2.1.17*	Lumpsum price for pyrite hopper level probes (high level) as loose supply in addition to items defined at S.N. 2.1.1	Nos.	2	3	
2.1.18*	Lumpsum price for pyrite hopper level probes (high - high level) as loose supply in addition to items defined at S.N. 2.1.1	Nos.	2	3	
2.1.19	Total price of Maintenance tools & tackles and erection & commissioning spares (as per requirement of technical specification)	Lot	1	1	
2.1.20	Total price of Structure Steel for pyrite hopper support, support for air & water piping, mill reject conveying pipe support structure, pipe rack etc	Lot	2	3	

Note:

1	The bidder shall furnish unit rates for variable item (marked *) for necessary adjustment (plus or minus) variation during detailed Engg. stage. The unit rates quoted above shall be considered and no separate unit rates shall be quoted. Unit rates shall be valid throughout the contract.
2	Any other item not indicated above, but required to make the system complete in all respects, as per the technical specification, shall be supplied without any cost implication to BHEL.
3	Any cell left blank in the unpriced schedule shall be treated as "Quoted" and is included in total price.

Particulars of bidder / authorised representative

Name	Designation	Signature	Date	Company Seal

BOQ LIST OF MANDATORY SPARES		Doc No:	PE-PF-417-160-A001
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TECHNICAL SPECIFICATION:		PE-TS-417-160-A001	
Sl. No.	DESCRIPTION	UNIT	QTY
1	415 Volt Motor (above 30KW Rating upto 200KW)		
1.1	End Shield Cover Driving & Non-Driving End	Set	2 Sets for each type and rating of Motor
1.2	Driving End & Non-Driving End Bearing	Set	2 Sets for each type and rating of Motor
1.3	Cooling Fan	No.	2 Nos. for each type and rating of Motor
1.4	Motor Space Heater	No.	2 Nos. for each type and rating of Motor
1.5	Motor Terminal Block	No.	2 Nos. for each type and rating of Motor
1.6	Complete Set of Coupling	Set	2 Sets for each Application
2	415 Volt Motor (Upto 30KW Rating)		
2.1	Driving End & Non-Driving End Bearing	Set	6 Sets for each type and rating of Motor
2.2	Cooling Fan	No.	4 Nos. for each type and rating of Motor
2.3	Motor Terminal Block	No.	10 Nos. for each type and rating of Motor
2.4	Complete Set of Coupling	Set	2 Sets for each Application
3	Field Instruments		
3.1	Transmitters/ Gauges/Switches etc. along with relevant accessories	No.	20% of total or at least four (whichever is higher) for each type along with accessories.
3.2	Temperature Element (RTD/Thermo-couple) with thermowell	No.	20% of each type, range and immersion length. Minimum 10 nos.
4	Solenoid Valves		
4.1	Solenoid Valve Coil	No.	4 nos. of each rating & insulation
4.2	Plunger	No.	2 nos. of each type
4.3	Seat	No.	4 nos. of each type & size
4.4	Gaskets	Set	4 sets of each type & size
4.5	O-Ring set	Set	10 sets of each type & size
5	Process Connection Piping (Impulse piping/tubing, sampling piping / tubing & air supply piping as applicable)		
5.1	Valves of all types	No.	20% of each type, class, size & model
5.2	Valve Manifolds (2 way/3 way/5 way)	No.	20% of each type, class, size & model
5.3	Fittings	No.	20% of each type, class, size & model
5.4	Filter Regulators	No.	40% of each model
6	Junction Box		
6.1	Junction box	No.	20% of total quantity for each size but minimum 4 nos.
6.2	Terminals in Terminal blocks	No.	20 nos. of each type
Note:			
i)	Mandatory spares listed above are bare minimum requirement. In case any additional mandatory spares requirement is covered elsewhere in the tender specification apart from specified above, same shall be deemed to have been covered in bidder's scope of supply.		
ii)	"One (1) Set" and "One (1) set of each type & rating" is defined as total numbers as required for one complete replacement for one equipment of similar size & capacity.		

iii)	In case any spare indicated in the specification is "not applicable" for particular equipment, then suitable applicable alternate spare shall be supplied by the bidder without any financial implication."
iv)	For quantities indicated in percentage, fractions are to be rounded-off to next higher integer.
v)	Bidder to write "Quoted / Not Applicable" against all items. Any item which is quoted as "not applicable" by the bidder in the above list and is found to be "applicable" at a later date shall be supplied by the bidder without any commercial and delivery implication.
vi)	Any cell left blank in the unpriced schedule shall be treated as "Quoted" and is included in total price.
vii)	Bidder to note that even though there may be some spares which are repetitive at various sl.no mentioned above, bidder to ensure that prices are quoted against each sl.no. In case any cell is left blank in the unpriced schedule shall be treated as "quoted" and included in total price.
viii)	For additional notes, refer Annexure-E of Mandatory spares in tender technical specification.

Particulars of bidder / authorised representative

Name	Designation	Signature & company seal