



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-2-Aug-19

CORRIGENDUM- 04

PROJECT	:	1 x 660 MW Panki STPP
PACKAGE	:	FUEL OIL HANDLING AND STORAGE SYSTEM
ENQUIRY NO	:	PE/PG/PKI/E-6256/2019 Dt. 04.07.2019
SUBJECT	:	PRE BID REPLIES

Type of Corrigendum			
Technical Corrigendum -	☒	Commercial Corrigendum -	☐

In reference to the above mentioned tender enquiry please note the following.

1. Replies of Pre-Bid queries (attached).

All the other terms and conditions of the tender enquiry remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

Vinit Kumar Verma
Dy. Manager

S. No.	DESCRIPTION 1	DESCRIPTION 2	DESCRIPTION 3	UNIT OF MEASUREMENT	QTY	BIDDERS QUERIES DTD. 31.07.2019	BHEL REPLY
1.1 (a)	MECHANICAL ITEMS	Strainer elements	Drain Pumps	No.	1	For drain oil tank vertical pumps has been provided and for these pumps strainer element is not required. Please confirm	Bidder to follow specification.
1.1 (b)	MECHANICAL ITEMS	Strainer elements	LDO unloading pumps	No.	1		
1.2 (a)	MECHANICAL ITEMS	Relief valve complete assembly	LDO unloading pumps	No.	1		
1.3 (a)	MECHANICAL ITEMS	Bearings of	LDO unloading pumps	set	1		
1.3 (b)	MECHANICAL ITEMS	Bearings of	Drain Pumps	set	1		
1.4 (a)	MECHANICAL ITEMS	Rotor Assembly (Complete cartridge assembly)	LDO unloading pumps	set	1		
1.4 (b)	MECHANICAL ITEMS	Rotor Assembly (Complete cartridge assembly)	Drain Pumps	set	1		
1.5	MECHANICAL ITEMS	Coupling Bolts with nuts, washer and bushed for LDO unloading pumps	NA	set	1 set for each size of coupling		
1.6	MECHANICAL ITEMS	Wearing Rings	NA	set	1 set for each type of pump		
1.7	MECHANICAL ITEMS	Gland Packing (if applicable)	NA	set	1 set for each type of pump		
1.8	MECHANICAL ITEMS	Mechanical seal Assembly (if applicable)	NA	set	2 sets each for LDO.		
1.9	MECHANICAL ITEMS	Shaft Sleeve	NA	set	1 set for each type of pump		
1.10 (a)	MECHANICAL ITEMS	Valves (Each type and size)	NA	No.	1 number, where the total quantity of a particular type and size of valve is less than or equal to 10.		
1.10 (b)	MECHANICAL ITEMS	Valves (Each type and size)	NA	No.	2 numbers, where the total quantity of a particular type and size of valve is less than 40 but more than 10.		
1.10 (c)	MECHANICAL ITEMS	Valves (Each type and size)	NA	No.	10% of total quantity (to nearest whole number) of a particular type and size of valve, where the total quantity of a particular type and size of valve is more than 40.		
1.11	MECHANICAL ITEMS	Neoprene rubber unloading hoses with end connections (complete hose)	NA	Nos.	Ten (10) Nos.		
2.00.01.01 (i)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Indicators, Recorders, Electrical Metering and Skid Mounted Instruments	Indicators, recorders and meters offered from each model for the project. These instruments shall be supplied with three sets of blank scales.	Nos.	10 % of Installed of each type/Model or a minimum of one number for each model and type, whichever is more	We feel these indicators, recorders & meterings are panel mounted. Since Electrical Panel is not in our scope of supply, These spares are not applicable. Please Confirm.	Bidder to follow spares as per the specification and the applicability of the system.
2.00.01.01 (ii)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Indicators, Recorders, Electrical Metering and Skid Mounted Instruments	For skid mounted instruments	Nos.	10% of total number of instruments for each Type and model or a minimum of one number for each model and type, whichever is more	Same as Above.	

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2.00.01.01 (iii)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Indicators, Recorders, Electrical Metering and Skid Mounted Instruments	Panel and Wall mounted Indicators	Nos.	10% of total number of instruments or a minimum of one number for each type, model, range etc. whichever is more	Same as Above.	Bidder to follow spares as per the specification and the applicability of the system.
2.00.01.02 (i)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Temperature Elements and Thermowells	Thermocouple/RTD elements	Nos.	15% of flue gas temp, coal air mixture temp, boiler/TG metal temp thermocouples and 5% for other applications of total duplex thermocouple element assemblies and duplex RTD assemblies (with head assembly, terminal block and nipple) of each type and length whichever is more. The element assembly shall be suitable for direct replacement in the corresponding thermowell.	Since heating of oil is not required for LDO. These are not applicable. Please Confirm.	
2.00.01.02 (ii)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Temperature Elements and Thermowells	Thermowells	Nos.	10% for each type of temperature sensors or a minimum of one for each type & size, whichever is more	Same as Above.	
2.00.01.03	CONTROL AND INSTRUMENTATION ITEMS	Temperature Transmitters and Electronic Transmitters of all type, range and model no. (For Pressure, DP, Temp, Flow, Level), Process Transmitters, Radar type level transmitter, 3D type level Transmitter with local display, Magnetic/Electromagnetic flow meter with local display, mass flow meter with local display, Process meters, Junction Box, Position Transmitter, Transducer or any other instrument etc.	NA	Nos.	10% of total number of instruments/transducers offered for each model and type, rating or a minimum of one number for each model, rating and type, whichever is more.	Regarding Mass Flowmeter we have already considered 1No at the process line. Do you require 1 No spare also? Please Confirm.	
2.00.01.04	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments - Process actuated switch Devices- As applicable for each package as per following:	1. Temperature Switches; 2. Differential pressure Switches; 3. Pressure switches 4. Flow switches 5.; Level Switches 6. Safety Protection Switches	Nos.	5% of total nos. or 1 no. of each make, model, range and type whichever is more	Temperature Switches, DP Switches, Pressure Switches & Safety Protection Switches are not applicable in process. Hence we have not considered these spares. Please Confirm.	
2.00.01.05	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Local Gauges like temperature gauges, pressure gauges, differential Pressure gauges, flow gauges, flow meters with local display etc.	Nos.	10% of total number of instruments/transducers offered for each model and type, rating or a minimum of one number for each model, rating and type, whichever is more.	Temperature Gauges, DP Gauges, Flow Gauges are not applicable in this process. Hence we have not considered these spares. Regarding Flowmeters with Local display we have already considered 1No at the process line. Do you require 1 No spare also? Please Confirm.	
2.00.01.06	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	All type of Rota meters & Sight Flow Indicator.	No.	1 no. of each range and type	These are not applicable in this process. Please Confirm.	
2.00.01.07	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	PD Type flow transmitters with local display.	No.	1 no. of each type and model	These are not applicable in this process. Please Confirm.	

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21.00.01.08	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Guided wave RADAR for Hot well application	No.	1 no.	These are not applicable in this process. Please Confirm.	Bidder to follow spares as per the specification and the applicability of the system.
2.00.01.09	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Guided wave RADAR for LP heaters	No.	1 no. for each of the LP heaters	These are not applicable in this process. Please Confirm.	
2.00.01.10	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Impact head type flow element	No.	20% or 2 nos. of each make and type, whichever is more	These are not applicable in this process. Please Confirm.	
2.00.01.11	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Ultrasonic type flow measurement	No.	20% or 2 nos. of each make and type, whichever is more	These are not applicable in this process. Please Confirm.	
2.00.01.12	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Ultrasonic type level transmitter	%	50% of each type and length, including sensors	Considered already from Sln. 2.00.01.03. This item is repeated again. Please Confirm.	
2.00.01.13	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Any other instruments not indicated in the tender P&ID but required for control, monitoring and operation of the equipment/plant/systems	...	10% or 2 nos. of each type whichever is more		
2.00.01.14 (a)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	a) 10% or 2 nos. whichever is more of each type of illuminators with holder and reflector	These are not applicable in this process. Please Confirm.	
2.00.01.14 (b)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	b) 20% or 5 nos. whichever is more of each type of bulb.	These are not applicable in this process. Please Confirm.	
2.00.01.14 (c)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	c) 10% or 2 nos. whichever is more of each type of bi-color rollers.	These are not applicable in this process. Please Confirm.	
2.00.01.14 (d)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	d) 10% or 2 nos. whichever is more of each type of glass along with pair of gaskets (cushion & wet gaskets)	These are not applicable in this process. Please Confirm.	
2.00.01.14 (e)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	e) 10% or 2 nos. whichever is more of each type of gaskets for gauge cocks/valve bonnet/ packing.	These are not applicable in this process. Please Confirm.	
2.00.01.14 (f)	CONTROL AND INSTRUMENTATION ITEMS	Measuring & Field Instruments -	Level Gauges	...	f) 10% or 2 nos. whichever is more of each type scale.	These are not applicable in this process. Please Confirm.	
2.00.01.15	CONTROL AND INSTRUMENTATION ITEMS	Complete Electronic card/PCB assembly and Power supply card assembly.	NA	...	10% of Electronic card/PCB assembly for each type, model & rating or a minimum of one number for each model, rating and type, whichever is more for each type of Transmitter, switch & Flow Meters.	These are not applicable in this process. Please Confirm.	

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2.00.16 (a)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Spare control valve stem packing for each control valve.	Set	1	These are not applicable in this process. Please Confirm.	Bidder to follow spares as per the specification and the applicability of the system.
2.00.16 (b)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Moulded rubber diaphragms for each control valve.	No.	2	These are not applicable in this process. Please Confirm.	
2.00.16 (c)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Diaphragms, O-rings and rubber gaskets, seals for each type, make etc. of control valve.	%	100	These are not applicable in this process. Please Confirm.	
2.00.16 (d)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Lubricants for gaskets for each control valve on one year consumption basis.	%	100	These are not applicable in this process. Please Confirm.	
2.00.16 (e)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Limit switches and valve positioner for each control valve.	set	2 sets of limit switches and 1 set of valve positioner for each control valve.	These are not applicable in this process. Please Confirm.	
2.00.16 (f)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Position transmitter (4-20mA) and its accessories for total qty. of control valve.	%	20	These are not applicable in this process. Please Confirm.	
2.00.16 (g)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Valve trims (such as plug, stem, seat ring / cage, guide bushing, stem lock pin, packing retaining ring, etc) for each type of control valve.	set	1	These are not applicable in this process. Please Confirm.	
2.00.16 (h)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asapplicable]	Pneumatic and electro-hydraulic actuato assembly	...	One complete Pneumatic and electro-hydraulic actuato assembly of each type or min 10% for each type, model, rating and size whichever is more.	These are not applicable in this process. Please Confirm.	

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2.00.16 (i)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asaplicable]	Solenoid valves or each type for total qty. of control valves.	...	20 percent of Solenoid valves or min 2 no. of each type for total qty. of control valves.	These are not applicable in this process. Please Confirm.	Bidder to follow spares as per the specification and the applicability of the system.
2.00.16 (j)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asaplicable]	I to P converters, Pressure regulators.	%	20	These are not applicable in this process. Please Confirm.	
2.00.16 (k)	CONTROL AND INSTRUMENTATION ITEMS	Mandatory Spares for Control valves, PowerCylinder, Control Dampers, Actuators, FlowElements and Accessories [Following spares shall be furnished for controlvalves, Power Cylinder, Control Dampers asaplicable]	Air lock relays	...	10% or 2 nos. of each type whichever is more air lock relays	These are not applicable in this process. Please Confirm.	
3.00.01	ELECTRICAL	415V Motors	Terminal plates	...	10 Nos. each for small motors upto 30 kW & 4 Nos. each for more than 30 kW		
3.00.02	ELECTRICAL	415V Motors	Heaters	set	2 sets		
3.00.03	ELECTRICAL	415V Motors	Greasing arrangements	set	4 sets each type of motor		
3.00.04	ELECTRICAL	415V Motors	Motor of each type and rating	...	10% of the installed quantity or minimum 1 number whichever be higher		
3.00.05	ELECTRICAL	415V Motors	Bearings (DE and NDE) for each type and rating of motor	Set	4		
3.00.06	ELECTRICAL	415V Motors	Stator winding coils for all type of LT motors	Set	One (1)		
3.00.07	ELECTRICAL	415V Motors	Dust seals and gaskets for each type of motors	Set	Three (3)		