



BHARAT HEAVY ELECTRICALS LIMITED  
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-9-Apr-22

CORRIGENDUM- 02

<b>PROJECT</b>	<b>:</b>	<b>1x660 MW PANKI TPS</b>
<b>PACKAGE</b>	<b>:</b>	<b>FUEL OIL HANDLING AND STORAGE SYSTEM</b>
<b>ENQUIRY NO</b>	<b>:</b>	PE/PG/PKI/E-6964/2022 dtd 09/05/2022
<b>SUBJECT</b>	<b>:</b>	<b>PRE- BID CLARIFICATION</b>

Type of Corrigendum			
Technical Corrigendum -	<input checked="" type="checkbox"/>	Commercial Corrigendum -	<input checked="" type="checkbox"/>

In reference to the above mentioned tender enquiry for **FUEL OIL HANDLING AND STORAGE SYSTEM** package.

Please note the following:

1. Bidders are requested to go through the attached pre-bid clarification.

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

Yours faithfully,

For and on behalf of BHEL

Guru Das  
Manager

S. No.	DESCRIPTION	UNIT	QTY	USPL query	BHEL Reply
	<b>CONTROL &amp; INSTRUMENTATION (MANDATORY SPARES)</b>				
<b>1.00.01</b>	<b>Measuring &amp; Field Instruments</b>				
<b>1.00.01.01</b>	<b>Indicators, Recorders, Electrical Metering and Skid Mounted Instruments</b>				
(i)	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	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
(ii)	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	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication

(iii)	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	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
<b>1.00.01.02</b>					
(i)	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.	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
(ii)	Thermowells	Nos.	10% for each type of temperature sensors or a minimum of one for each type & size, whichever is more	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
<b>1.00.01.03</b>	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	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.	<b>DP, pressure, ultrasonic level transmitter alone applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.04	Process actuated switch Devices- As applicable for each package as per following:	Nos.	5% of total nos. or 1 no. of each make, model, range and type whichever is more	<b>Not applicable</b>	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
	1. Temperature Switches				
	2. Differential pressure Switches				
	3. Pressure switches				
	4. Flow switches				
	5. Level Switches				
	6. Safety Protection Switches				

1.00.01.05	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.	This item is for local gauges. Flow meter is not local gauge. Please confirm whether we have to consider mass flow meter against this sl.no	Bidder to follow technical specification. The spares pertaining to flow meter are applicable. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.06	All type of Rota meters & Sight Flow Indicator.	No.	1 no. of each range and type	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.07	PD Type flow transmitters with local display.	No.	1 no. of each type and model	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.08	Guided wave RADAR for Hot well application	No.	1 no.	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.09	Guided wave RADAR for LP heaters	No.	1 no. for each of the LP heaters	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.10	Impact head type flow element	No.	20% or 2 nos. of each make and type, whichever is more	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.11	Ultrasonic type flow measurement	No.	20% or 2 nos. of each make and type, whichever is more	Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.12	Ultrasonic type level transmitter	%	50% of each type and length, including sensors	This item is covered in	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.13	Any other instruments not indicated in the tender P&ID but required for control, monitoring and operation of the	10% or 2 nos. of each type whichever is more		Not applicable	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
1.00.01.14	<b>Level Gauges</b>				
	a) 10% or 2 nos. whichever is more of each type of illuminators with holder and reflector			Not applicable as we have only mechanical level indicator in this package	Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication
	b) 20% or 5 nos. whichever is more of each type of bulb.				
	c) 10% or 2 nos. whichever is more of each type of bi-color rollers.				
	d) 10% or 2 nos. whichever is more of each type of glass along with pair of gaskets (cushion & wet gaskets)				
	e) 10% or 2 nos. whichever is more of each type of gaskets for gauge cocks/valve bonnet/ packing.				
	f) 10% or 2 nos. whichever is more of each type scale.				
1.00.01.15	Complete Electronic card/PCB assembly and Power supply card assembly.	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.			
1.00.16	<b>Mandatory Spares for Control valves, Power Cylinder, Control Dampers, Actuators, Flow Elements and Accessories</b>				
(A)	Following spares shall be furnished for control valves, Power Cylinder, Control Dampers as applicable				

a)	One set of spare control valve stem packing for each control valve.		
b)	Two moulded rubber diaphragms for each control valve.		
c)	100% of Diaphragms, O-rings and rubber gaskets, seals for each type, make etc. of control valve.		
d)	100 percent qty. of lubricants for gaskets for each control valve on one year consumption basis.		
e)	2 sets of limit switches and 1 set of valve positioner for each control valve.		
f)	20 percent of position transmitter (4-20mA) and its accessories for total qty. of control valve.		
g)	One (1) set of valve trims (such as plug, stem, seat ring / cage, guide bushing, stem lock pin, packing retaining ring, etc) for each type of control valve.		
h)	One complete Pneumatic and electro-hydraulic actuator assembly of each type or min 10% for each type, model, rating and size whichever is more.		
i)	20 percent of Solenoid valves or min 2 no. of each type for total qty. of control valves.		
j)	20% of I to P converters, Pressure regulators.		
k)	10% or 2 nos. of each type whichever is more air lock		

**Not applicable as there are no control valves in this package**

Bidder to follow technical specification. The P&ID's have already been furnished to the bidder. In case the spares are applicable same shall be provided by bidder without any time and cost implication