

Republic of Iraq
Ministry of Electricity
General directorate of electrical energy
production – BASRAH
COMMERCIAL DEPT.
E-mail: gdeep_comm_dept@yahoo.com
E-mail: tradin@gdeepbasra.com



جمهورية العراق
وزارة الكهرباء
المديرية العامة لإنتاج الطاقة الكهربائية في البصرة
قسم الشؤون التجارية


No. : 11079
DATE : 12 / 7 / 2015

SUB./Re. Advertising TENDER No. 5/2/20/1201 S

The General Directorate of Electrical Energy Production in Basrah is advertising tender to supply **(supply and installation Level , Flow Gauges and Temperature Sensors)** for Najibyah power station according to the specifications and general conditions as attached . So those who want to participate, should consult Commercial department to buy the tender conditions for non-refundable amount of (300,000 I.D) and submit primary insurances(bid bond) amounting of (43500\$) forty three thousands and five hundred the offer value issued by accredited bank in Iraq. knowing that the potential amount of the material is(1,450,000)\$. The deadline of receiving offers is 12 o'clock of the official work day dated 3/8/2015.in case the closing date happens to be an unexpected official holiday , the closing date will be the next official work day after the holiday.

Our directorate is not obliged to accept the lowest offer.

www.moelc.gov.iq
E-mail: trading@gdeepbasra.com


Tahseen Zaki Salim
Director General
12 / 7 / 2015

Republic of Iraq
 Ministry of Electricity
 General Directorate of Electrical Energy Production -
 BASRAH
 E-mail: gdeep comm dept@yahoo.com

جمهورية العراق
 وزارة الكهرباء
 المديرية العامة لإنتاج الطاقة الكهربائية في البصرة

Power Station : NAJIBIYAH
 REF No. 5/2/20/1201 S

المحطة : النجيبية
 رقم الطلب : ١٢٠١/٢٠/٢/٥ أس

Supply and Installation Level, Flow Gauges and Temperature Sensors

ITEM NO	SPECIFICATION	unit	QTY
	<p><u>General notes :-</u></p> <ul style="list-style-type: none"> Instrument should be from original maker ABB , E+H , Emerson or yokogawa . The origins must be : USA, Japan, UK and West Europe only. All modifications and changes on the pipes must cover by the supplier during installation process. All safety requirement during installation should be achieved by contractor. All necessary piping isolation (to prevent heat radiation) for instrument which installed should be achieved by contractor . All signals should be transmitted to control room. All necessary cables and fitting should be supplied by contractor . Commissioning and start up must cover by the contractor . Supply all necessary programming tool kit . One year guarantee . 		
1	<p>Replace old level system of Boiler Drums with high pressure and temperature Guided Level Radar with the following specifications (suitable for use in boiler drum application):-</p> <ul style="list-style-type: none"> - By pass chamber with color glass for aggressive liquids with drainage and suitable for night application . - Gas phase compensation - Level monitoring (Min., Max., and range) - Max. Temp. 400°C. - Max. Pr. 160 bar - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Probe and by pass chamber must cover -315mm till +315mm from Zero 	set	12

Handwritten signature and initials

Handwritten signature and initials

	<p>Axis.</p> <ul style="list-style-type: none"> - Ambient temperature 70 °C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Special tools are not required for commissioning and able to configure the device from front panel keys with menu guide. Direct access to all parameters from display - Dual compartment housing design - It should have HISTOROM and able to provide data back up during replacement of faulty electronics. - Dual compartment housing design - Degree of protection IP68 - O-ring material must be Graphite with spare. - Isolation valves and fitting should be included with spare 25 % . - Should be contain flange after isolating valves - Should be contain flushing drain valve . - Replace 8 and supply 4 as spare . - Spare part should be complete set (By pass chamber with Radar transmitter) . <p>Note:- such system not used in our existing applications .</p>		
2	<p>Replace old level system of Heater with high pressure and temperature Guided Level Radar with the following specifications :-</p> <ul style="list-style-type: none"> - By pass chamber with color glass for aggressive liquids with drainage and suitable for night application. - Gas phase compensation - Level monitoring (Min., Max., and range) - Max. Temp. 450°C. - Max. Pr. 30bar - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Probe and by pass chamber must cover 1000 mm from Zero Axis. - Ambient temperature 60°C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Dual compartment housing design - Degree of protection IP68 - O-ring material must be Graphite with spare. - Isolation valves and fitting should be included with spare 25 % . - Should be contain flange after isolating valves - Should be contain flushing drain valve . - Replace 6 and supply 2 as spare . - Spare part should be complete set (By pass chamber with Radar transmitter) . <p>Note:- such system not used in our existing applications .</p>	set	8
3	<p>Replace old level system of Low Pressure Heater with high pressure and temperature Guided Level Radar with the following specifications :-</p> <ul style="list-style-type: none"> - By pass chamber with color glass for aggressive liquids with drainage 	set	12

	<p>and suitable for night application.</p> <ul style="list-style-type: none"> - Gas phase compensation - Level monitoring (Min., Max., and range) - Max. Temp. 250°C. - Max. Pr. 10bar - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Probe and by pass chamber must cover 1000 mm from Zero Axis. - Ambient temperature 60°C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Dual compartment housing design - Degree of protection IP68 - O-ring material must be Graphite with spare. - Isolation valves and fitting should be included with spare 25 %. - Should be contain flange after isolating valves - Should be contain flushing drain valve . - Replace 10 and supply 2 as spare . - Spare part should be complete set (By pass chamber with Radar transmitter) . <p>Note:- such system not used in our existing applications .</p>		
4	<p>Replace old level system of condenser with Guided Level Radar with the following specifications :-</p> <ul style="list-style-type: none"> - By pass chamber with color glass for aggressive liquids with drainage and suitable for night application. - Level monitoring (Min., Max., and range) 0 ,1000 , 1000 mm - Max. Temp. 60°C. - Max. Pr. - 0.95 bar - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Probe and by pass chamber must cover 1000 mm from Zero Axis - Ambient temperature 60°C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Dual compartment housing design - Dual compartment housing design - Degree of protection IP68 - O-ring material must be Graphite with spare. - Isolation valves and fitting should be included with spare 25 %. - Should be contain flange after isolating valves - Should be contain flushing drain valve . - Replace 2 and supply 2 as spare . - Spare part should be complete set (By pass chamber with Radar transmitter) . 	set	4

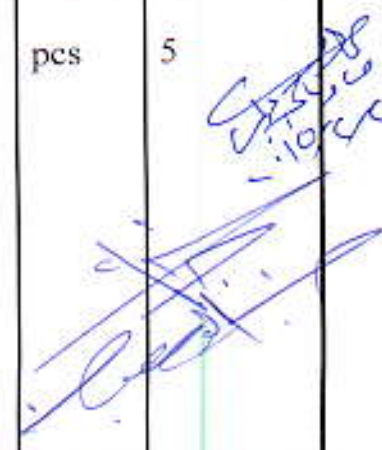



	<u>Note:-</u> such system not used in our existing applications .		
5	<p>Replace old level system of deaerator with Guided Level Radar with the following specifications :-</p> <ul style="list-style-type: none"> - By pass chamber with color glass for aggressive liquids with drainage and suitable for night application . - Level monitoring (Min., Max., and range) 0 , 250 , 200 cm - Operation Temp. 160°C. - Operation Pr. 5bar - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Probe and by pass chamber must cover 2500 mm from Zero Axis - Ambient temperature 60°C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Dual compartment housing design - Degree of protection IP68 - O-ring material must be Graphite with spare . - Isolation valves and fitting should be included with spare 25 %. - Should be contain flange after isolating valves - Should be contain flushing drain valve . - Install 2 and supply 2 as spare . - Spare part should be complete set (By pass chamber with Radar transmitter) . <p><u>Note:-</u> such system not used in our existing applications .</p>	set	4
6	<p>Supply and install level system of Turbine Oil Tank with Guided Level Radar with the following specifications :-</p> <ul style="list-style-type: none"> - Level monitoring (Min., Max., and range) - Emulsion on fuel surface must avoid in the measurements process - Operation Temp. 60°C. - Operation Pr. 1bar - Rod probe 16mm (316 L) - HART with 4...20mA analog x 2 wires - Reliable measurements in case :- <ul style="list-style-type: none"> - Moved surface and foam - Dust Applications - Equipped with data memory - Local Level monitoring - Factory precalibration - Ambient temperature 60°C. - The offered transmitter's accuracy should be min +/- 2 mm. - The GWR architecture should be modular design. - Dual compartment housing design - Degree of protection IP68 - O-ring material must be silicone rubber with spare. - Replace 2 and supply 1 as spare. 	pcs	3
7	<p>Replace the old Boiler crude oil Flow Meter with Flange Coriolis Mass Flow Meter with the following specifications :-</p>	pcs	5

Handwritten signature and date:
 11/07/20

Handwritten signature and initials:
 C. H. P.

	<ul style="list-style-type: none"> - Operation Pressure : 40 bar - Max. Pressure : 60 bar - Operation Temperature : 80 °C - Max. Temperature : 120 °C - Flow (Min, Oper., Max) : 2,14,16m³/hr - Pipe diameter : 70mm, CS - Fluid : Crude Oil - Measurements : Flow mass/density/temperature - Insensitivity to vibrations and Immune from external piping forces. - Maximum measured error:- <ul style="list-style-type: none"> - Mass flow and volume flow: ± 0.15% - Density : ±0.01 g/cc - Temperature : ±0.5 °C - Ambient temperature range : -10 to +60 - Degree of protection: IP 67 - Powder coated die-cast aluminum Transmitter housing - Acid and alkali-resistant outer surface Sensor housing - Human interface : <ul style="list-style-type: none"> Liquid-crystal display: backlit, two lines Selectable display of different measured values and status variables Local operation with three keys - Power Supply : 24V DC - Output signal 4-20 mA - LCD and totalizer indication <p>Replace 4 and supply 1 as spare</p> <p>Note:- such system not used in our existing applications .</p>		
8	<p>Supply and install Ultrasonic Clamp On flow meter for water pipeline with the following specifications :-</p> <ul style="list-style-type: none"> - Pipeline Dimensions : 2 m x 12 mm , CS - Flow (Oper . , Max .) : 15,000m³/hr, 51,000m³/hr - Pressure : 1.5 bar - Automatic frequency scan for optimized installation and maximum measuring performance. - Maximum measured error : 2% - Ambient temperature range ; -10 to +60°C - Degree of protection : IP 67 - Human interface : <ul style="list-style-type: none"> Liquid-crystal display: backlit, two lines Selectable display of different measured values and status variables Local operation with three keys - With totalizer - Aluminum housing. 	set	1
9	<p>Supply and installation Hot Tap Insertion Thermal Mass Flow for Boiler natural gas pipelines with the following specifications :-</p> <ul style="list-style-type: none"> - Measurements : Mass flow , Gas temperature , Gas heat flow - Pipeline dimensions : 325mm x 6 mm - Pressure Oper., Max : 1.3 bar, 2 bar - Temperature Min, Max, : -10°C , 40°C - Flow Min, Oper., Max. : 2000,11000,15000 Nm³/hr - Maximum measured error : <ul style="list-style-type: none"> ±1.0% of reading ±0.5% of full scale - Response time : less than 2 seconds for 63 % of a given step change. - Ambient temperature range ; -10 to +60oC - Degree of protection Standard: IP 67 	pcs	5



 10/05/20

	<ul style="list-style-type: none"> - Transmitter housing: Compact housing: powder coated diecast aluminum - Human interface : Liquid-crystal display: backlit, two lines Selectable display of different measured values and status variables Local operation with three keys - With totalizer - Install 4 and supply 1 as spare 		
10	<p>Supply and installation Insertion Type DP Pitot Tube Flow for main natural gas pipelines with the following specifications :-</p> <ul style="list-style-type: none"> - Measurements : Mass flow , Gas temperature , Gas heat flow - Pipeline dimensions : 650 mm - Pressure Oper., Max : 1.3 bar, 2 bar - Temperature Min, Max, : -10°C , 40°C - Flow Min, Oper., Max. : 8000,44000,60000 Nm³/hr - Maximum measured error : ±1.0% of reading ±0.5% of full scale - Response time : less than 2 seconds for 63 % of a given step change. - Ambient temperature range : -10 to +60°C - Degree of protection Standard: IP 67 - Transmitter housing: Compact housing: powder coated die-cast aluminum. - Human interface : Liquid-crystal display: backlit, two lines Selectable display of different measured values and status variables Local operation with three keys - With totalizer - Install 1 and supply 1 as spare 	pcs	2
11	<p>Supply and installation Insertion Type DP Pitot Tube Flow Meter for Boiler air ducts with the following specifications :-</p> <ul style="list-style-type: none"> - Measurements : Mass flow , Air temperature - Duct dimensions : H X W (1000 , 800 mm). - Air flow max , oper. 60 000 , 45 000 NM³/hr - Pressure Max., Oper. : 400 mm H₂O, 150 mm H₂O - Temperature Min, Max, : +5 C , 250 C - Maximum measured error : typically 1 % of calculated volume or mass - Ambient temperature range : -10 to +60°C - Degree of protection Standard: IP 67 . - suitable for dusty weather . - Easy for remove , clean and re install . - Optimized for minimum pressure loss and high accuracy - Integrated temperature sensor) - Robust design, no moving parts - Transmitter: <ul style="list-style-type: none"> - 4-line display - Quick setup - Compact and remote version <p>Install 16 and supply 4 as spare</p>	pcs	20

Handwritten signature and date:
 11/10/2016

Large handwritten signature:

12	<p>Supply Thermocouples Temperature sensors with head mounting convertor</p> <p><u>specification:</u></p> <ul style="list-style-type: none"> - Type J TC. - 0-100 °c. - Probe length 80 mm , diam. 6 mm. - ½ IN. NPT male connection, - With head mounting convertor 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C 	set	20
13	<p>Supply Thermocouple Temperature sensors with head mounting convertor</p> <p><u>specification:</u></p> <ul style="list-style-type: none"> - Type J TC. - 0-100 °c. - Probe length 300 mm , diam. 6 mm. - ½ IN. NPT male connection. - With head mounting convertor 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C 	set	10
14	<p>Supply Thermocouple Temperature sensors with head mounting convertor</p> <p><u>specification:</u></p> <ul style="list-style-type: none"> - Type J TC. - 0-100 °c. - Probe length 1250 mm , diam. 6 mm. - ½ IN. NPT male connection. - With head mounting convertor 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C 	set	10
15	<p>Supply Thermocouple Temperature sensors with head mounting convertor</p> <p><u>specification:</u></p> <ul style="list-style-type: none"> - Type K TC. - 0-300 °c. - Probe length 1250 mm , diam. 6 mm. - ½ IN. NPT male connection. - With head mounting convertor 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C 	set	10
16	<p>Supply Thermocouple Temperature sensors with head mounting convertor</p> <p><u>specification:</u></p> <ul style="list-style-type: none"> - Type K TC. - 0-600 °c. - Probe length 250 mm , diam. 6 mm. - ½ IN. NPT male connection. - With head mounting convertor 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C 	set	20



 10/10/20

17	Supply Thermocouple Temperature sensors with head mounting convertor <u>specification:</u> - Type K TC. - 0-600 °c. - Probe length 1250 mm , diam. 6 mm. - ½ IN. NPT male connection. - With head mounting converter 4-20 mA, 24 Vdc , looped power . - Ambient temperature not less than 70 °C	set	10
18	Supply Temperature sensors with LCD display <u>specification:</u> - Type J TC - 0-100 °c. - Probe length 160 mm , diam. 6 mm. - ½ IN. NPT male connection. - With Local Indication Display LCD . - Output Signal 4-20 mA, power supply 24 V dc . - Ambient temperature not less than 70 °C	set	10
19	Supply thermo resistance RTD pt 100 with the following specification (suitable for measuring Turbine bearing metal Temperature) • Length 26 mm , diameter 5 mm • Without head mounting . • Should be compatible to installed inside bearing housing. • Each sensors should be contain thermal and metal grid shielded wire with length not less than 3 meters .	pcs	200
20	Eight specialists (4 automatic + 4 mechanics) should be trained on the above mentioned equipment at the manufacturing factory and see the material before shipping to Iraq.		

Note:

1. Supplying and installation Period is 9 months.
2. Warranty Period (one year) from the date of final receiving.
3. Required Origins (USA-UK- JAPAN or WEST EUROPE).
4. Materials must be from the Companies (ABB , E&H , Emerson , Yokogawa)

المدير التجاري

مدير المحطة

المهندس المختص

قسم المحطات

م. عبد الكافي

م. عبد الرزاق