

### Bid Document

Bid Details	
Bid End Date/Time	23-07-2020 17:00:00
Bid Opening Date/Time	23-07-2020 17:30:00
Bid Life Cycle (From Publish Date)	90 (Days)
Bid Offer Validity (From End Date)	70 (Days)
Ministry/State Name	Ministry Of Coal
Department Name	Materials Management
Organisation Name	Northern Coalfields Limited
Office Name	Nagpur
Total Quantity	1
Item Category	Water Quality Meters / Analyzers
MSE Exemption for Years of Experience and Turnover	No
Startup Exemption for Years of Experience and Turnover	No
Bid to RA enabled	No
Inspection Required	No
Estimated Bid Value	120000

### EMD Detail

Required	No
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### ePBG Detail

Required	No
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### Splitting

Bid splitting not applied.

### Water Quality Meters / Analyzers ( 1 pieces )

### Technical Specifications

\* As per GeM Category Specification

Specification	Specification Name	Values	Bid Requirement (Allowed Values)
TYPE / NOMENCLATURE / PROTECTION	<b>Type of Meter / Analyzer</b>	Bench Type	Bench Type
	<b>Functional nomenclature</b>	Multi Parameter Water Quality Analyzer	Multi Parameter Water Quality Analyzer
	<b>Ingress Protection (Main Unit)</b>	NA being Bench Top	IP 67, NA being Bench Top
	<b>Calibration</b>	Automatic	Automatic
MEASURED WATER QUALITY PARAMETERS	<b>Dissolved Oxygen (DO)</b>	No	No
	<b>DO % Stauration</b>	No	No
	<b>Conductivity</b>	Yes	Yes
	<b>Resistivity</b>	Yes	Yes
	<b>Salinity</b>	Yes	Yes
	<b>Total Dissolved Solids (TDS)</b>	Yes	Yes
	<b>pH</b>	Yes	Yes
	<b>Oxidation Reduction Potential (ORP)</b>	Yes	Yes
	<b>Ammonium</b>	No	No
	<b>Nitrate</b>	No	No
	<b>Chloride</b>	No	No
	<b>Turbidity</b>	No	No
	<b>Depth</b>	No	No
	<b>Temperature</b>	Yes	Yes
	<b>Atmospheric Pressure</b>	No	No
MEASUREMENT OF DISSOLVED OXYGEN (DO) / DO % Saturation	<b>Dissolved Oxygen (DO) measurement Principle</b>	NA	NA
	<b>Sensor / Probe/ Electrode Type</b>	NA	Lifetime Luminiscent for Optical, Polarographic for Electro Chemical, Galvanic for Electro Chemical, NA
	<b>Measurement Range for DO Content ( in ppm or mg/l )</b>	NA	NA
	<b>Resolution ( in ppm or mg/l )</b>	NA	*

	DO Accuracy ( +/- )	0	*
	<b>Measurement Range for DO % Saturation ( in % )</b>	NA	NA
	Resolution ( in % )	NA	*
	DO % Accuracy ( +/- )	0	*
MEASUREMENT OF CONDUCTIVITY (EC)	<b>Conductivity measurement principle</b>	Conductive (contacting)	Conductive (contacting)
	<b>Sensor/ Probe/Electrode Type</b>	2 Cell Electrode	2 Cell Electrode, 4 Cell Electrode
	<b>Material of Electrode</b>	NA	NA
	<b>Measurement Range ( in <math>\mu\text{S/cm}</math> )</b>	0-500	0-500, 0-200000
	Resolution ( in mho or $\mu\text{S/cm}$ )	0.01	*
	EC Accuracy ( +/- )	1	*
MEASUREMENT OF RESISTIVITY	<b>Resitivity measurement principle</b>	Conductivity Conversion	Conductivity Conversion
	<b>Lowest Measurement Value for Resistivity (in ohm-cm)</b>	2	2
	<b>Highest Measurement Value for Resistivity (in Mega ohm-cm)</b>	20	20
	Resolution ( in ohm-cm)	1	*
	Resistivity Accuracy(+/- )	1	*
MEASUREMENT OF SALINITY	<b>Salinity measurement principle</b>	Conductivity Conversion	Conductivity Conversion
	<b>Measurement Range ( in parts per thousand or g/l or PSU)</b>	0-80	0-80
	Resolution (in g/l)	0.01	*
	Salinity Accuracy ( +/- )	1	*
MEASUREMENT OF TOTAL DISSOLVED SOLIDS (TDS)	<b>TDS measurement principle</b>	Conductivity Conversion	Conductivity Conversion
	<b>TDS Measurement Range ( in parts per</b>	0-500	0-500

	<b>thousand or g/l )</b>		
	Resolution ( in g/l )	0.01	*
	TDS Accuracy ( +/- )	1	*
MEASUREMENT OF pH	<b>pH measurement principle</b>	Electro chemical	Electro chemical
	<b>Sensor / Probe / Electrode Type</b>	Glass Electrode	Glass Electrode
	<b>Number of Sensors / Electrodes</b>	Single Electrode	Single Electrode
	<b>pH Measurement Range</b>	0-14	0-14
	Resolution ( in pH number )	0.1	*
	pH Accuracy ( +/- )	0.002	*
MEASUREMENT OF OXIDATION REDUCTION POTENTIAL (ORP)	<b>ORP measurement principle</b>	Electro chemical	Electro chemical
	<b>Sensor / Probe/ Electrode Type</b>	NA	Platinum Electrode, Ion Selective Electrode (ISE), NA
	<b>Number of Sensors /Electrodes</b>	Single Electrode	Single Electrode
	<b>Lowest Measurement Value for ORP (in mV )</b>	0	0
	<b>Highest Measurement Value for ORP (in mV )</b>	2000	2000
	Resolution ( in $\pm$ mV )	0.1	*
	ORP Accuracy ( +/- )	0.2	*
MEASUREMENT OF AMMONIUM	<b>Sensor / Probe/ Electrode Type</b>	NA	Ion Selective Electrode, NA
	<b>Measurement Range ( in ppm or mg/l )</b>	NA	0-100, 0-200, 0-300, 0-400, 0-500, 0-600, NA
	Resolution ( in ppm or mg/l )	NA	*
	Ammonium Accuracy ( +/- )	0	*
MEASUREMENT OF NITRATE	<b>Sensor / Probe/ Electrode Type</b>	NA	NA
	<b>Measurement Range ( in ppm or mg/l )</b>	NA	NA
	Resolution ( in ppm or mg/l )	NA	*
	Nitrate Accuracy ( +/- )	0	*

MEASUREMENT OF CHLORIDE	<b>Sensor/Probe/Electrode Type</b>	NA	NA
	<b>Measurement Range ( in ppm or mg/l )</b>	NA	0-400, 0-600, 0-800, 0-1000, 0-1200, 0-1500, NA
	Resolution ( in ppm or mg/l )	NA	*
	Chloride Accuracy ( +/- )	0	*
MEASUREMENT OF TURBIDITY	<b>Turbidity measurement principle</b>	NA	NA
	<b>Light Source</b>	NA	NA
	<b>Measurement of scattered light</b>	NA	NA
	<b>Lowest Measurement Value for Turbidity (in FNU or NTU )</b>	NA	NA
	<b>Highest Measurement Value for Turbidity (in FNU or NTU )</b>	NA	NA
	Resolution ( in FNU or FTU )	NA	*
	Turbidity Accuracy ( +/- )	0	*
MEASUREMENT OF TEMPERATURE	<b>Sensor/Probe Type</b>	Resistance Temperature (RTD) Detector	Resistance Temperature (RTD) Detector
	<b>Lowest Measurement Value for Temperature ( °C )</b>	0	0
	<b>Highest Measurement Value for Temperature ( °C )</b>	100	100
	Resolution ( °C )	0.1	*
	Temperature Accuracy ( +/- )	0.3	*
MEASUREMENT OF PRESSURE	<b>Sensor /Probe Type</b>	NA	NA
	<b>Lowest Measurement Value for Pressure (in mmHg )</b>	NA	NA
	<b>Highest Measurement Value for Pressure (in mmHg )</b>	NA	NA

	Resolution ( in mmHg )	NA	*
	Pressure Accuracy ( +/- )	0	*
MEASUREMENT OF DEPTH	<b>Measurement Method</b>	NA	NA
	<b>Depth Measurement Range (in meters)</b>	NA	NA
	<b>Length of Cable connecting peobe (inclusive in the scope of supply)</b>	0	0.0
COMPENSATION / CORRECTION	<b>Temperature correction</b>	Automatic	Automatic
	<b>Salinity Correction</b>	Automatic	Automatic
	<b>Barometric Pressure correction</b>	NA	NA
DISPLAY / STORAGE	Type of Display	LCD with Backlight	*
	Display Digit Size	5.9	*
	Number of Digits in Display	4	*
	Number of parameters displayed simultaneously	8	*
	Memory (in Data Sets)	500	*
	Internal memory (GB)	1	*
	In-built GPS	No	*
	Date /time Stamp in Entries	Yes	*
	Connectivity interface	RS 232	*
POWER SOURCE	Power Source	Mains (230 ±10 Volts / 50 Hz AC)	*
	Battery Size, if Non Rechargeable Battery	NA	*
	Battery Chemistry, if Rechargeable Battery	NA	*
	Voltage of each Battery	9	*
	Number of Batteries required for operation	0	*
	Number of Batteries Inclusive in the Scope of Supply	0	*
	Battery Capacity (mAh)	0	*
	Battery Life	0	*
	Suitable Adapter to be	Yes	*

	supplied to make the equipment Work on 230 V $\pm$ 10 %, 50 Hz		
GENERIC	Armour housing of Sensor / Probe	Plastic	*
	Probe / Sensor / Electrode supplied with equipment	Yes	*
	Number of electrodes supplied	2	*
	Weight	650	*
	Dimensions ( mm x mm x mm )	-	*
	Carry Case included in the scope of supply	No	*
	Any other features	-	*
	List of Items and Quantity of each item included in the offer	-	*
OPERATING CONDITIONS	<b>Minimum Operating Temperature</b>	0	0.0
	<b>Maximum Operating Temperature</b>	55	55.0
	<b>Operating Humidity, Rh at 40 deg C</b>	85	85.0
WARRANTY	<b>Warranty on Equipment</b>	3	3.0
	<b>Warranty on Probe / Electrode</b>	6	6.0
	<b>Warranty on Cables for Connecting Probe</b>	1	1.0
CERTIFICATION	<b>Availability of Test Reports from Central Govt / NABL approved / ILAC accredited Lab to prove conformity to the specification</b>	No	No
	If Yes, Test Report to be furnished to the Buyer on demand	NA	*
	Test Report No and Date	-	*
	Name of the Lab and Address	-	*

\* Specifications highlighted in bold are the Golden Parameters.

\* Bidders may note that In respect of non-golden Parameters, the specifications 'Values' chosen by Buyer will generally be preferred over 'Bid requirement ( allowed Values) by the Buyer.

### **Additional Specification Documents**

#### **Consignees/Reporting Officer and Quantity**

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Abhay Kumar	440015,CMPDI CAMPUS, KASTURBA NAGAR, JARIPATKA, NAGPUR	1	60

#### **Bid Specific Additional Terms and Conditions**

1. Scope of supply (Bid price to include all cost components) : Only supply of Goods

[This Bid is also governed by the General Terms and Conditions](#)

**---Thank You---**