

ANNEXURE -I

 Emerson Process Management (India) Pvt. Limited. CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA USER : TELANGANA STATE POWER GENERATION CORPORATION LTD. CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD. EPM. DOC. NO. : AS-BHE-17-059&060-013 TITLE : DATA SHEETS - ANALYSERS							
0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17		
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE		
DATA SHEET FOR PH ANALYSER							
1	GENERAL	Manufacturer	EMERSON PROCESS MANAGEMENT, USA	3	Analyzer Model No	1056 - 03 - 22 - 38-HT	
2	GENERAL	Sensor Model No	3900-01-10	4	Instrument Range	0 to 14 pH (Freely Programmable)	
5	SERVICES, & RANGES	SERVICE & TAG Nos.		RANGE			
		REHEATED STEAM & LBB10CQ002		REF. DOC. No. AS-BHE-17-059&060-015			
		SEPRATOR O/L STEAM & HAH01CQ002		REF. DOC. No. AS-BHE-17-059&060-015			
		FEED WATER TO ECONOMISER & LAB80CQ015		REF. DOC. No. AS-BHE-17-059&060-015			
		MAIN STEAM (SH STEAM) & LBA01CQ001		REF. DOC. No. AS-BHE-17-059&060-015			
		DEAERATOR OUTLET & LAB00CQ011		REF. DOC. No. AS-BHE-17-059&060-015			
		CONDENSATE POLISHER O/L & LCA50CQ011		REF. DOC. No. AS-BHE-17-059&060-015			
		CONDENSATE AT CEP DISCHARGE & LCA20CQ011		REF. DOC. No. AS-BHE-17-059&060-015			
		DMCW I/L OF PHE (TG AUX) & PGC15CQ001		REF. DOC. No. AS-BHE-17-059&060-015			
		DMCW I/L OF PHE (BLR AUX) & PGC40CQ001		REF. DOC. No. AS-BHE-17-059&060-015			
CONDENSATE COOLING WATER & LCB62CQ001		REF. DOC. No. AS-BHE-17-059&060-015					
6	PH SENSOR SPECIFICATIONS	Type of Cell	Flow Through	14	Temperature Compensation	Auto	
7		Sensor End connection size	1" NPT	15	Temperature Electrode	Pt100	
8		Measuring / Reference Electrode	Glass Coupled / Glass	16	Accuracy	±0.01 pH	
9		Sensor Cable length	REFER DOC. No. AS-BHE-17-059&060-006 (LOOSE SUPPLY)	17	Response Time	5 seconds to 90% of final reading	
10		Sensor Maximum Pressure capacity	0 to 100 psig	18	pH Sensor Model No Decodification	3900 :General Purpose pH/ORP Sensor	
11		Sensor Maximum Temperature capacity	(-10) to 100 °C			01: Preamplifier - Smart, 32 ft (10m) cable	
12		Sample Flow Rate	3.6 LPH			10:General Purpose Low Resistivity (GPLR) pH Glass (0-14pH)	
13		Sensor Installation	In Flow Cell				
19		1056 TRANSMITTER SPECIFICATIONS	Transmitter Type	Microprocessor Based	28	Display Type	Monochromatic graphic LCD
20			Mounting	Panel Mounting	29	Calibration	Automatic / Menu driven
21	Housing Material		Polycarbonate	30	Alarm	Available	
22	Protection Class		NEMA 4X (IP66)	31	Electrical Connection	Accepts 1/2" or PG13.5 conduit fittings	
23	Power Supply		85 TO 265 VAC, 50 HZ	32	Weight	1.5 Kg.	
24	Dimension		155mm(W) x 155mm(H) x 131mm (D)	33	Display Unit / Indication	pH	
25	Ambient Temperature Limit		0 to 55°C	34	Diagnostics	Glass impedance, Reference impedance, Power Fault, Sensor Information, Temperature Offset	
26	Inputs		One or Two isolated sensor input	35	Temperature compensation	Manual or Automatic	
27	Outputs		2 No. 4-20 mA (Output-1 HART)				
Model Decodification-Transmitter : 1056-03-22-38-HT							
36	1056	Intelligent Dual Input Analyzer					
	03	Switching AC 85-265VAC, 50/60 Hz with 4 alarm relays					
	22	pH					
	38	None					
	HT	HART® Digital Communication					

 Emerson Process Management (India) Pvt. Limited. CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA USER : TELANGANA STATE POWER GENERATION CORPORATION LTD. CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD. EPM. DOC. NO. : AS-BHE-17-059&060-013 TITLE : DATA SHEETS - ANALYSERS																		
0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17													
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE													
DATA SHEET FOR CONDUCTIVITY ANALYSER																		
1	GENERAL	Manufacturer	EMERSON PROCESS MANAGEMENT, USA	3	Analyzer Model No													
2		Sensor Model No	400-11/400-12 402-11 (Hotwell)	4	Instrument Range													
				1056 - 03 - 20 - 38-HT														
				0.01µS/cm to 200µS/cm (Freely Programmable) & 0.1µs/cm to 2000µS/cm (Freely Programmable)														
5	SERVICES, & RANGES	SERVICE, TAG Nos. & RANGE		SERVICE, TAG Nos. & RANGE														
		REHEATED STEAM, LBB10CQ001 & REF. DOC. No. AS-BHE-17-059&060-015		CONDENSATE AT CEP DISCHARGE, LCA20CQ014 & REF. DOC. No. AS-BHE-17-059&060-015														
		REHEATED STEAM, LBB10CQ004 & REF. DOC. No. AS-BHE-17-059&060-015		MAKE-UP WATER TO CONDENSER, LCR80CQ001 & REF. DOC. No. AS-BHE-17-059&060-015														
		SEPRATOR OIL STEAM, HAH01CQ001 & REF. DOC. No. AS-BHE-17-059&060-015		MAKE-UP WATER TO CONDENSER, LCR80CQ002 & REF. DOC. No. AS-BHE-17-059&060-015														
		SEPRATOR OIL STEAM, HAH01CQ003 & REF. DOC. No. AS-BHE-17-059&060-015		CONDENSATE COOLING WATER, LCB62CQ002 & REF. DOC. No. AS-BHE-17-059&060-015														
		FEED WATER TO ECONOMISER, LAB80CQ011 & REF. DOC. No. AS-BHE-17-059&060-015		HOTWELL-A, MAG10CQ011 & REF. DOC. No. AS-BHE-17-059&060-015														
		FEED WATER TO ECONOMISER, LAB80CQ013 & REF. DOC. No. AS-BHE-17-059&060-015		HOTWELL-A, MAG10CQ012 & REF. DOC. No. AS-BHE-17-059&060-015														
		MAIN STEAM (SH STEAM), LBA01CQ002 & REF. DOC. No. AS-BHE-17-059&060-015		HOTWELL-B, MAG20CQ011 & REF. DOC. No. AS-BHE-17-059&060-015														
		MAIN STEAM (SH STEAM), LBA01CQ003 & REF. DOC. No. AS-BHE-17-059&060-015		HOTWELL-B, MAG20CQ012 & REF. DOC. No. AS-BHE-17-059&060-015														
		CONDENSATE POLISHER O/L, LCA50CQ014 & REF. DOC. No. AS-BHE-17-059&060-015		CONDENSER-1, MAG10CQ13 & REF. DOC. No. AS-BHE-17-059&060-015														
		CONDENSATE POLISHER O/L, LCA50CQ015 & REF. DOC. No. AS-BHE-17-059&060-015		CONDENSER-2, MAG20CQ13 & REF. DOC. No. AS-BHE-17-059&060-015														
		CONDENSATE AT CEP DISCHARGE, LCA20CQ013 & REF. DOC. No. AS-BHE-17-059&060-015																
		6	CONDUCTIVITY SENSOR	Sensor Type	Insertion Type (Hotwell Application) Flow Through (other then Hotwell Application)	15	Temperature Electrode											
7	Sensor End connection size	400-11/12 : 3/4 inch NPT(M) 402-11 : 1 1/4" NPT(M)		16	Accuracy													
8	Electrode MOC	Titanium		17	Response Time													
9	Sensor Integral Cable length	REFER DOC. No. AS-BHE-17-059&060-006 (LOOSE SUUPLY)		18	Flow Cell Maximum Pressure Handling Capacity													
10	Sensor Maximum Pressure capacity	400-11/12 : 0 to 250 psig 402-11 : 0 to 200 psig		19	Flow Cell MOC													
11	Sensor Maximum Temperature capacity	400-11/12 : 0 to 105°C 402-11 : 0 to 100°C		20	Process Connection Size at Flow Through Tee - Inlet and Outlet													
12	Required Sample Flow Rate	400-11/12: 3.6 LPH		21	Flow Cell Maximum Temperature Handling Capacity													
13	Sensor Installation	400-11/12 : In Flow Cell 402-11 : Retractable		22	Conductivity Sensor Model Decodification (Other then Hotwell Application)													
14	Temperature Compensation	Auto	23	Conductivity Sensor Model Decodification (Hotwell Application)														
24	1056 TRANSMITTER SPECIFICATIONS	Transmitter Type	Microprocessor Based	33	Display Type													
25		Mounting	Panel Mounting	34	Alarm													
26		Housing Material	Polycarbonate	35	Calibration													
27		Protection Class	NEMA 4X (IP66)	36	Electrical Connection													
28		Power Supply	85 TO 265 VAC, 50 HZ	37	Weight													
29		Dimension	155mm(W) x 155mm(H) x 131mm (D)	38	Display Unit / Indication													
30		Ambient Temperature Limit	0 to 55°C	39	Diagnostics													
31		Inputs	One or Two isolated sensor input	40														
32		Outputs	2 No. 4-20 mA (Output-1 HART)															
<table border="1"> <tr> <td rowspan="6">41</td> <td colspan="2">Model Decodification-Transmitter : 1056-03-20-30-HT</td> </tr> <tr> <td>1056</td> <td>Intelligent Dual Input Analyzer</td> </tr> <tr> <td>03</td> <td>Switching AC 85-265VAC, 50/60 Hz with 4 alarm relays</td> </tr> <tr> <td>20</td> <td>Contacting Conductivity</td> </tr> <tr> <td>38</td> <td>None</td> </tr> <tr> <td>HT</td> <td>HART® Digital Communication</td> </tr> </table>						41	Model Decodification-Transmitter : 1056-03-20-30-HT		1056	Intelligent Dual Input Analyzer	03	Switching AC 85-265VAC, 50/60 Hz with 4 alarm relays	20	Contacting Conductivity	38	None	HT	HART® Digital Communication
41	Model Decodification-Transmitter : 1056-03-20-30-HT																	
	1056	Intelligent Dual Input Analyzer																
	03	Switching AC 85-265VAC, 50/60 Hz with 4 alarm relays																
	20	Contacting Conductivity																
	38	None																
	HT	HART® Digital Communication																
NOTE:- 1) HOTWELL CONDUCTIVITY SENSOR WILL BE WITHDRAWABLE TYPE.																		



Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATA SHEET FOR DISSOLVE O2 ANALYSER

1	GENERAL	Manufacturer	EMERSON PROCESS MANAGEMENT, USA	3	Analyzer Model No	1056-03-25-38-HT
2		Sensor Model No	499ATrDO-54-70	4	Instrument Range	0-200ppb (Freely Programmable)
5	SERVICES & RANGES	SERVICE & TAG Nos.		RANGE		
		FEED WATER TO ECONOMISER & LAB80CQ012		REF. DOC. No. AS-BHE-17-059&060-015		
		FEED WATER TO ECONOMISER & LAB80CQ018		REF. DOC. No. AS-BHE-17-059&060-015		
		DEAERATOR OUTLET & LAB00CQ012		REF. DOC. No. AS-BHE-17-059&060-015		
		CONDENSATE POLISHER O/L & LCA50CQ016		REF. DOC. No. AS-BHE-17-059&060-015		
		CONDENSATE AT CEP DISCHARGE & LCA20CQ012		REF. DOC. No. AS-BHE-17-059&060-015		
6	DISSOLVE O2 SENSOR SPECIFICATIONS	Sensor Type	Flow Through	14	Temperature Compensation	Auto
7		Sensor End connection size	1" NPT	15	Temperature Electrode	Pt100
8		Measuring / Reference Electrode MOC	Noryl, Viton, EPDM, Teflon, silicone	16	Accuracy	Accuracy at 25°C following air calibration: <20 ppb - ±1 ppb >20 ppb ± - 5% of reading
9		Sensor Integral Cable length	REFER DOC. No. AS-BHE-17-059&060-006 (LOOSE SUPPLY)	17	Response Time	Response Time at 25°C: <20 sec to 90% of final reading at 25°C (0 to 200 ppb oxygen)
10		Sensor Maximum Pressure capacity	0 to 65 psig	18	DO Sensor Model No Decodification	499ATrDO : Dissolved Oxygen Sensor - Trace DO
11		Sensor Maximum Temperature capacity	0 to 50°C			54: 1056 Compatible
12		Sample Flow Rate	6 LPH			70: Includes low flow cell
13		Sensor Installation	In Flow Cell			
19	1056 TRANSMITTER SPECIFICATIONS	Transmitter Type	Microprocessor Based	28	Display Type	Monochromatic graphic LCD
20		Mounting	Panel Mounting	29	Alarm	Available
21		Housing Material	Polycarbonate	30	Calibration	Automatic / Menu driven
22		Protection Class	NEMA 4X (IP66)	31	Electrical Connection	Accepts 1/2" or PG13.5 conduit fittings
23		Power Supply	85 TO 265 VAC, 50 HZ	32	Weight	1.5 Kg.
24		Dimension	155mm(W) x 155mm(H) x 131mm (D)	33	Display Unit / Indication	PPB OR PPM
25		Ambient Temperature Limit	-20 to 65°C	34	Diagnostics	Power Fault, Sensor Information, Temperature Offset
26		Inputs	One or Two isolated sensor input			
27		Outputs	2 No. 4-20 mA (Output-1 HART)			

Model Decodification-Transmitter : 1056-03-25-35-HT

1056	Intelligent Dual Input Analyzer
03	Switching AC 85-265VAC, 50/60 Hz with 4 alarm relays
25	Dissolved Oxygen
38	None
HT	HART® Digital Communication

Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATASHEET FOR SILICA ANALYSER (SWAS)

GENERAL	1	Application	Silica Measurement
	2	Manufacturer	ORION
	3	Model No	2230
	4	Area Classification	Safe Area
	5	Installation Location	Analyzer Panel
	6	Service & Tag Nos.	REHEATED STEAM & LBB10CQ003 SEPRATOR O/L STEAM & HAH01CQ004 FEED WATER TO ECONOMISER & LAB80CQ014 MAIN STEAM (SH STEAM) & LBA01CQ004 CONDENSATE POLISHER O/L & LCA50CQ013 CONDENSATE AT CEP DISCHARGE & LCA20CQ015 MAKE-UP WATER TO CONDENSER & LCR80CQ004
ANALYSER DETAILS	7	Measuring Principle	Colorimetric
	8	Operating range	0-5000 ppb
	9	Output	4-20 mA Analog
	10	Display	LCD With Backlight
	11	Accuracy	Less than 5% of reading or +/-0.5 ppb, whichever is greater, from 0 to 300 ppb. Less than 10% of reading from 300 to 5000 ppb.
	12	Repeatability	Less than +/-2% of reading or +/-0.5 ppb, whichever is greater from 0 to 300 ppb. Less than +/-5% of reading from 300 ppb to 5000 ppb.
	13	Response time	Less than 15 minutes per analysis
	14	Operating ambient temperature	0 to 45 °C (32 to 113 °F)
	15	Ambient humidity	90% at 40 °C (104 °F)
	16	Mounting	Panel Wall Mount
	17	Calibration	Auto calibration
	18	Power supply	100-240V AC, 100W, 50/60Hz
	19	Sample and drain Connection	Sample Inlet : 1/4 inch OD Tubing Sample Drain : 3/8 inch OD Tubing
	20	Enclosure Rating	NEMA12 (Electronics cabinet), NEMA4X (Fluidics cabinet)
	21	Sample Temperature Limit	5 to 40 °C (41 to 113 °F)
	22	Sample Flow Rate required	150ml/min
	23	Diagnostics	1) Reagent Empty 2) Calibration Error 3) High / Low concentration value
	24	Alarm	Available

Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATASHEET FOR SODIUM ANALYSER

GENERAL	1	Application	Sodium Measurement
	2	Manufacturer	Orion, USA
	3	Model No	2111LL
	4	Area Classification	Safe Area
	5	Installation Location	Analyzer Panel
	6	Service & Tag Nos.	FEED WATER TO ECONOMISER & LAB80CQ019 MAIN STEAM (SH STEAM) & LBA01CQ005 CONDENSATE POLISHER O/L & LCA50CQ012 CONDENSATE AT CEP DISCHARGE & LCA20CQ016
ANALYSER DETAILS	7	Type of Cell	Flow through ION Selection Electrode
	8	Flow Chamber	Flow through Flow Cell
	9	Operating range	0-200 ppb (Freely Programmable for this Range)
	10	Measuring electrode	Patented ROSS Ultra reference and ROSS Sodium sensing electrodes
	11	Output	4-20 mA for each sample through external Stream Selector
	12	Temperature Compensation	Automatic
	13	Readout Display	Custom backlit LCD with temperature, concentration, mV, error codes and menu driven prompts
	14	Accuracy	± 5% or 0.01 ppb
	15	Response time (T95)	Reach 95% of final reading within 2 minutes of injecting a standard solution
	16	Operating ambient temperature	5 to 45 °C
	17	Ambient humidity	5 to 95% non-condensing
	18	Mounting	Panel Mount
	19	Calibration	Menu Driven [Variation of Double Known Addition (DKA)] Recommended frequency once every month
	20	Power supply	230V AC, 50 Hz
	21	Sample and drain Connection	1/4" NPTF tube fitting
	22	Physical Size of Analyzer	650 x 450 x 270 mm
	23	Weight of Analyzer	22.7 kg
	24	Enclosure Rating	Waterproof enclosure: IP66 & NEMA 4X
	25	Sample Temperature Limit	5 to 45 °C
	26	Sample Pressure Limit	8 to 100 psig
	27	Sample Flow Rate required	40 mL/min
	28	Diagnostics	Programmable Alarms : High, low, error, calibration/offline
	29	Alarm	Available

Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATASHEET FOR HYDRAZINE ANALYSER

GENERAL	1	Application	Hydrazine Measurement
	2	Manufacturer	Orion, USA
	3	Model No	2118XP
	4	Area Classification	Safe Area
	5	Installation Location	Analyzer Panel
	6	Service & Tag No.	SEPRATOR O/L STEAM & HAH01CQ006 FEED WATER TO ECONOMISER & LAB80CQ017
ANALYSER DETAILS	7	Type	Continuous electrochemical single stream
	8	Operating range	0-200, ppb (Freely Programmable)
	9	Output	4 - 20 mA
	10	Readout Display	Custom backlit LCD with temperature, concentration, mV, error codes and menu driven
	11	Accuracy	± 5%
	12	Temperature Compensation	Automatic
	13	Operating ambient temperature	5 to 45 °C
	14	Response time (t 90)	Reach 90% of reading within 3 minute of injecting a standard solution
	15	Power supply	240V AC, 50 Hz
	16	Ambient humidity	up to 95% non-condensing
	17	Mounting	Panel Mount
	18	Calibration	Menu Driven (2 point calibration) Recommended frequency once every month
	19	Sample and drain Connection	1/4" NPTF tube fitting
	20	Additional features	LED status Indicator Green-OK, Yellow-Warning , Red-Failure
	21	Physical Size of Analyzer	650 x 450 x 270 mm
	22	Weight of Analyzer	22.7 kg
	23	Enclosure Rating	Waterproof enclosure: IP66 & NEMA 4X
	24	Sample Temperature required	5 to 45 °C
	25	Sample Pressure required	8 to 100 psig
	26	Sample Flow Rate required	40 mL/min
	27	Diagnostics	Available on Display
	28	Alarm	Available



Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATASHEET FOR CHLORIDE ANALYSER

GENERAL	1	Application	Chloride Measurement
	2	Manufacturer	Orion, USA
	3	Model No	2117LL
	4	Area Classification	Safe Area
	5	Installation Location	Analyzer Panel
	6	Service & Tag No.	CONDENSATE POLISHER O/L & LCA50CQ017
ANALYSER DETAILS	7	Measuring Principle	Chloride sensing electrode and reference electrode
	8	Operating range	5 ppb to 10 ppm (Freely Programmable for this Range)
	9	Output	4-20 mA
	10	Temperature Compensation	Automatic
	11	Display	Custom backlit LCD for concentration, slope, zero-potential, mV, temperature, error codes and diagnostic information
	12	Accuracy	10% of reading
	13	Response time (T 90)	2 minutes
	14	Operating ambient temperature	5 to 45 °C
	15	Ambient humidity	95% relative maximum, non-condensing
	16	Mounting	Panel Mount
	17	Calibration	Three point, off-line calibration, blank correction Recommended frequency once every month
	18	Power supply	230V AC, 50 Hz
	19	Sample and drain Connection	1/4" NPTF tube fitting
	20	Physical Size of Analyzer	650 x 450 x 270 mm
	21	Weight of Analyzer	22.7 kg
	22	Enclosure Rating	Waterproof enclosure: IP66
	23	Sample Temperature Limit	5 to 45 °C
	24	Sample Pressure Limit	8 to 100 psig
	25	Sample Flow Rate required	40 mL/min
	26	Diagnostics	Available on Display

Emerson Process Management (India) Pvt. Limited.

CONTRACTOR : BHARAT HEAVY ELECTRICALS LIMITED
 PROJECT : 1x800MW KOTHAGUDEM TPS STAGE-VII, UNIT#12, PALONCHA
 USER : TELANGANA STATE POWER GENERATION CORPORATION LTD.
 CONSULTANT : DEVELOPMENT CONSULTANTS PVT. LTD.
 EPM. DOC. NO. : AS-BHE-17-059&060-013
 TITLE : DATA SHEETS - ANALYSERS

0	FOR APPROVAL	R.Rahate	H.P.	H.P.	3-Mar-17
REV.	DESCRIPTION	PREPARED	CHECKED	APPROVED	DATE

DATASHEET FOR IRON ANALYSER

GENERAL	1	Application	IRON Measurement
	2	Manufacturer	Metrohm
	3	Model No	ICON
	4	Area Classification	Safe Area
	5	Installation Location	Analyzer Panel
	6	Service & Tag No.	REHEATED STEAM & LBB10CQ005 SEPRATOR O/L STEAM & HAH01CQ005 FEED WATER TO ECONOMISER & LAB80CQ016 MAIN STEAM (SH STEAM) & LBA01CQ006 CONDENSATE AT CEP DISCHARGE & LCA20CQ017 MAKE-UP WATER TO CONDENSER & LCR80CQ005
ANALYSER DETAILS	7	Measuring Principle	Differential Photometric Absorbance
	8	Operating range	0-2ppm (Programmable)
	9	Output	4-20 mA Analog
	10	Display	LCD
	11	Sample Temperature	5 - 40 °C
	12	Sample pressure	0 to 0.5 Bar
	13	Enclosure Material	Poly Propylene
	14	Classification	General Purpose Area
	15	Ingress Protection	IP54
	16	Ambient Temperature	5 – 40 Deg C
	17	Dimension	380 x 210 x 600 mm
	18	Power supply	220/240 V, 50/60 Hz.

CATION COLUMN			PART CODE CTN1	
General	Make	JVD/LOTUS		
	Sample	Water		
	Over All Size (L x OD)	450mm X 60mm (5 mm Wall Thickness)		
Material	Cylinder	Acrylic		
	End Caps	SS 316 BAR STOCK		
	Quantity	750ml Cation Resin In Hydrogen Ion Form		
Connection	Inlet	1/4" NPT (F)		
	Outlet	1/4" NPT (F)		
	Service	Water		
	Cation Resin	Stongly Acidic H+ ION Resin(Indion 225H)		
	MOC (Wetted Parts)	SS316,Acrylic Viton		
	Pressure	6kg cm ²		
	Temperture	50 ° C		
	Pressure	25 LPH		
	SS tag plate should be providing at wet panel.			
We confirm that Cation filter colour change from Brown to light yellow when there is life degrate.				
Description	For Approval	EMERSON PROCESS MANAGEMENT (INDIA) PVT. LTD.		
Approved	H.P.			
Checked	H.P.	DOCUMENT NO.	SHEET NO	
Prepared	Rajan Palav	AS-BHE-17-059&060-014	32 OF 43	