

Tender No: 06 / SAL / MAINT / 2018-19

Sub: Invitation of quotation for Calibration of instruments

List of instruments requiring calibration

GROUP 'A'

Total= 55 Instruments(3 pages)

S. No	NAME	TYPE	M/C NO.	RANGE	MAKE	CODE NO.	ACCEPTANCE CRITERIA	PERIODICITY (Yr.)	Calibration Charges at our site including taxes (other than GST)	Calibration Charges at your Laboratory including taxes (other than GST)
<b>D</b>	<b>MISCELLANEOUS</b>									
1	Vernier Caliper	Analog		0 - 300mm	MITUTOYO	A01601	± 20 micron	1		
2	Micrometer	Analog		0 - 25 mm	MITUTOYO	A01701	± 10 micron	1		
<b>SECTION: INTAGLIO</b>										
<b>A</b>	<b>LOCATION : HYDRAULIC UNIT</b>									
3	Shore hardness Tester	Analog		0 - 100 <sup>0</sup> A	TECLOCK	B01501	± 1 <sup>0</sup> A	1		
4	Micrometer	Analog		0 - 25 mm	MITUTOYA	B01701	± 10 micron	1		
<b>SECTION: NUMBERING</b>										
<b>A</b>	<b>LOCATION : MISCELLANEOUS</b>									
5	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04301	± 20 microns	1		
6	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04302	± 20 microns	1		
7	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04303	± 20 microns	1		
8	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04304	± 20 microns	1		
9	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04305	± 20 microns	1		
10	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04306	± 20 microns	1		
11	Digimatic depth gauge	Digital		0 - 208.50 mm	MITUTOYO	D04307	± 20 microns	1		
12	Dial test indicator	Analog		0 - 100 micron	MITUTOYO	D05201	± 2 microns	1		
13	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01701	± 10 microns	1		
14	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01702	± 10 microns	1		
15	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01704	± 10 microns	1		
16	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01705	± 10 microns	1		
17	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01706	± 10 microns	1		
18	Micrometer	Analog		0 - 25 mm	MITUTOYO	D01707	± 10 microns	1		
19	Vernier Calliper	Analog		0-300 mm	MITUTOYO	D01601	± 20 microns	1		

20	Shore Hardness tester	Analog		0 - 100 <sup>0</sup> A	HIROSHIMA	D01501	± 1 <sup>0</sup> A	1		
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SECTION: PRE-PRINTING										
A	LOCATION : ROLLER COATER									
21	Dial Gauge	Analog	RC-1	0-100 mm	MITUTOYA	J04301	± 20 microns	1		
22	Dial Gauge	Analog	RC-2	0-100 mm	MITUTOYA	J04301	± 20 microns	1		
23	Dial Gauge	Analog	RC-2	0-100 mm	MITUTOYA	J04301	± 20 microns	1		
24	Dial Gauge	Analog	RC-2	0-100 mm	MITUTOYA	J04301	± 20 microns	1		
K	MISCELLANEOUS									
25	Dial gauge	Analog		0-25 mm	BATY	E02501	± 10 microns	1		
26	Dial gauge	Analog		0-25 mm	BATY	E02502	± 10 microns	1		
27	Depth measuring gauge	Analog		0-1 inch	Baty	E04301	± 10 microns	1		
28	Dial Gauge	Analog		0 to 25 mm	Baty	E02503	± 10 microns	1		
29	Shore Hardness Tester	Analog		0 - 100 <sup>0</sup> A	Teclock	E01502	± 1 <sup>0</sup> A	1		
SECTION: MEASURING INSTRUMENTS										
30	Height gauge	Analog		0-300 mm	MITUTOYA	J04101	± 20 microns	1		
31	Combination set	Analog		0-180 <sup>0</sup>	MITUTOYA	J04201	± 0.5 <sup>0</sup>	1		
32	Vernier calliper	Analog		300 mm	MITUTOYA	J01601	± 20 microns	1		
33	Vernier calliper	Analog		300 mm	MITUTOYA	J01602	± 20 microns	1		
34	Vernier calliper	Analog		150 mm	MITUTOYA	J01603	± 20 microns	1		
35	Micrometer	Analog		0-25 mm	MITUTOYA	J01701	± 10 microns	1		
36	Micrometer	Analog		0-25 mm	MITUTOYA	J01702	± 10 microns	1		
37	Micrometer	Analog		25-50 mm	MITUTOYA	J01703	± 10 microns	1		
38	Dial gauge	Analog		0 - 3 mm	PEACOCK	J02501	± 10 microns	1		
39	Dial gauge	Analog		0 - 3 mm	PEACOCK	J02502	± 10 microns	1		
40	Multimeter Fluke-179	Digital		AC/DC 1000V, AC/DC 10A, Resistance: 600 MΩ - 60M Ω	FLUKE	A04401	± 2.5 % of the range	1		
41	AC/DC Clamp meter Model 2003	Digital		AC-750V, DC-1000V, AC/DC2000A, Resistance: 1500Ω	KYORITSU	A04501	± 2.5 % of the range	1		
42	Multimeter M92ACE	Digital		DC1000V, AC750, AC/DC 20A, Resis : 20M Ω	MASTECH	K04401	± 2.5 % of the range	1		

43	Vernier calliper	Analog		300 mm	MITUTOYA	D01602	± 20 microns	1		
44	AC/DC Clamp meter, 725A	Digital		AC/DC 600 V, AC/DC 725A, Resistance: 40 MΩ	METRIX+	D04501	± 2.5 % of the range	1		
45	Multimeter WACO - 235	Digital		AC/DC 1000V, AC/DC 20A, Resistance: 200 MΩ,	WACO	D04401	± 2.5 % of the range	1		
46	AC/DC Clamp meter, Model 2003	Digital		AC-750V, DC-1000V, AC/DC2000A, Resistance: 1500Ω	KYORITSU	F04501	± 2.5 % of the range	1		
47	Micrometer	Analog		0-25 mm	MITUTOYA	F01701	± 10 microns	1		
48	Vernier calliper	Analog		0-300 mm	MITUTOYA	G01601	± 20 microns	1		
49	Micrometer	Analog		0-25 mm	MITUTOYA	B01702	± 10 microns	1		
50	Shore hardness Tester	Analog		0 - 100 0 A	TECLOCK	B01502	± 10 A	1		
51	Multimeter Fluke-179	Digital		AC/DC 1000V, AC/DC 10A, Resistance: 600 MΩ - 60MΩ	FLUKE	B04401	± 2.5 % of the range	1		
52	Multimeter DM-73C	Digital		AC/DC 600V, Resistance: 34 MΩ	AMPROBE	B04402	± 2.5 % of the range	1		
53	AC/DC Clampmeter, DT-6250	Digital		AC/DC 600 V, AC/DC 725A, Resistance: 40 MΩ	METRIX+	B04502	± 2.5 % of the range	1		
54	Vernier calliper	Analog		0-300 mm	MITUTOYA	B01601	± 20 microns	1		
55	AC/DC Clampmeter, 2343	Digital		AC/DC 650 V, AC-1000A, Resistance: 4 kΩ	YOKOGAWA	F04502	± 2.5 % of the range	1		

## Price Bid

ANNEXURE-I (Total -14 Pages)

Tender No: 06 / SAL / MAINT / 2018-19

Sub: Invitation of quotation for Calibration of instruments

List of instruments requiring calibration

GROUP 'B'

Total = 89 Instruments(6 Pages)

S. No	NAME	TYPE	M/C NO.	RANGE	MAKE	CODE NO.	ACCEPTANCE CRITERIA	PERIODICITY (Yr.)	Calibration Charges at our site including taxes (other than Service tax)	Calibration Charges at your Laboratory including taxes (other than Service tax)
<b>SECTION: OFFSET</b>										
<b>A</b>	<b>LOCATION : COOL. WATER CIRC. UNIT</b>									
1	Temp. Controller	Digital	LT-101	(-100) - (+100) °C	REX	A11101	± 2° C of set temp. (22 <sup>0</sup> C)	2		
2	Temp. Controller	Digital	LT-102	(-100) - (+100) °C	REX		± 2° C of set temp. (22 <sup>0</sup> C)	2		
3	Temp. Controller	Digital	LT-103	(-100) - (+100) °C	REX	A31103	± 2° C of set temp. (22 <sup>0</sup> C)	2		
4	Temp. Controller	Digital	LT-104	(-100) - (+100) °C	REX	A41104	± 2° C of set temp. (22 <sup>0</sup> C)	2		
5	Temp. Controller	Digital	LT-105	(-100) - (+100) °C	REX	A51105	± 2° C of set temp. (22 <sup>0</sup> C)	2		
6	Temp. Controller	Digital	LT-106	(-100) - (+100) °C	REX	A61106	± 2° C of set temp. (22 <sup>0</sup> C)	2		
7	Temp. Controller	Digital	LT-107	(-100) - (+100) °C	REX	A71107	± 2° C of set temp. (22 <sup>0</sup> C)	2		
8	Temp. Controller	Digital	LT-108	(-100) - (+100) °C	REX	A81108	± 2° C of set temp. (22 <sup>0</sup> C)	2		
<b>B</b>	<b>LOCATION : HYDRAULIC UNIT</b>									
9	Pressure Gauge	Analog	LT-101	0-250 Kgf/cm <sup>2</sup>	ASK	A11209	± 3% of the reading	2		
10	Pressure Gauge	Analog	LT-102	0-250 Kgf/cm <sup>2</sup>	ASK	A21210	± 3% of the reading	2		
11	Pressure Gauge	Analog	LT-103	0-250 Kgf/cm <sup>2</sup>	ASK	A31211	± 3% of the reading	2		
12	Pressure Gauge	Analog	LT-104	0-250 Kgf/cm <sup>2</sup>	ASK	A41212	± 3% of the reading	2		
13	Pressure Gauge	Analog	LT-105	0-250 Kgf/cm <sup>2</sup>	ASK	A51213	± 3% of the reading	2		
14	Pressure Gauge	Analog	LT-106	0-250 Kgf/cm <sup>2</sup>	ASK	A61214	± 3% of the reading	2		
15	Pressure Gauge	Analog	LT-107	0-250 Kgf/cm <sup>2</sup>	ASK	A71215	± 3% of the reading	2		
16	Pressure Gauge	Analog	LT-108	0-250 Kgf/cm <sup>2</sup>	ASK	A81216	± 3% of the reading	2		

<b>C</b>	<b>LOCATION : PNEUMATIC UNIT</b>									
17	Pressure Gauge (MLF)	Analog	LT-101	0 - 10 Kgf/cm <sup>2</sup>	SMC	A11201	± 5 % of the reading	2		
18	Pressure Gauge (MLF)	Analog	LT-102	0 - 10 Kgf/cm <sup>2</sup>	SMC	A21202	± 5 % of the reading	2		
19	Pressure Gauge (MLF)	Analog	LT-103	0 - 10 Kgf/cm <sup>2</sup>	SMC	A31203	± 5 % of the reading	2		
20	Pressure Gauge (MLF)	Analog	LT-104	0 - 10 Kgf/cm <sup>2</sup>	SMC	A41204	± 5 % of the reading	2		
21	Pressure Gauge (MLF)	Analog	LT-105	0 - 10 Kgf/cm <sup>2</sup>	SMC	A51205	± 5 % of the reading	2		
22	Pressure Gauge (MLF)	Analog	LT-106	0 - 10 Kgf/cm <sup>2</sup>	SMC	A61206	± 5 % of the reading	2		
23	Pressure Gauge (MLF)	Analog	LT-107	0 - 10 Kgf/cm <sup>2</sup>	SMC	A71207	± 5 % of the reading	2		
24	Pressure Gauge (MLF)	Analog	LT-108	0 - 10 Kgf/cm <sup>2</sup>	SMC	A81208	± 5 % of the reading	2		
<b>SECTION: INTAGLIO</b>										
<b>A</b>	<b>LOCATION : HYDRAULIC UNIT</b>									
25	Pressure gauge	Analog	INT-103	0-250 Kgf/ cm <sup>2</sup>	ASK	B31201	± 3 % of the reading	2		
26	Pressure gauge	Analog	INT-104	0-250 Kgf/ cm <sup>2</sup>	ASK	B41202	± 3 % of the reading	2		
27	Pressure gauge	Analog	INT-105	0-250 Kgf/ cm <sup>2</sup>	ASK	B51203	± 3 % of the reading	2		
28	Pressure gauge	Analog	INT-106	0-250 Kgf/ cm <sup>2</sup>	ASK	B61204	± 3 % of the reading	2		
29	Pressure gauge	Analog	INT-107	0-250 Kgf/ cm <sup>2</sup>	ASK	B71205	± 3 % of the reading	2		
30	Pressure gauge	Analog	INT-118	0-250 Kgf/ cm <sup>2</sup>	NKS	B81206	± 3 % of the reading	2		
31	Pressure gauge	Analog	INT-119	0-250 Kgf/ cm <sup>2</sup>	NKS	B91207	± 3 % of the reading	2		
<b>SECTION: WSTP</b>										
<b>A</b>	<b>LOCATION : FILTER PRESS</b>									
32	Pr. Switch (w/p soln.)	Analog	UNIT 1	1 - 10 kgf/cm <sup>2</sup> P <sub>1</sub> - P <sub>2</sub> = 0.8 - 4.0	UEDA	C11301	± 5 % of the reading	2		
33	Pr. Switch (w/p soln.)	Analog	UNIT 2	1 - 10 kgf/cm <sup>2</sup> P <sub>1</sub> - P <sub>2</sub> = 0.8 - 4.0	UEDA	C21302	± 5 % of the reading	2		

<b>B</b>	<b>LOCATION: AIR RECEIVING TANK</b>									
34	Pressure Gauge	Analog	UNIT 1	0 - 15 kgf/cm <sup>2</sup>	Shinagawa Sokki	C11210	± 0.5 kgf/cm <sup>2</sup>	2		
35	Pressure Gauge	Analog	UNIT 2	0 - 15 kgf/cm <sup>2</sup>	Shinagawa Sokki	C21211	± 0.5 kgf/cm <sup>2</sup>	2		
36	Pressure Switch	Analog	UNIT 1	0.05 - 1.0 Mpa P1 - P2 = 0.03- 0.4 MPa	SMC	C11314	± 5 % of the reading	2		
37	Pressure Switch	Analog	UNIT 2	0.05 - 1.0 Mpa P1 - P2 = 0.03- 0.4 MPa	SMC	C21315	± 5 % of the reading	2		
<b>C</b>	<b>LOCATION: WIPING SOLUTION RECOVERY PLANT (GENESIS)</b>									
38	Pressure Switch	Analog	Seal Flushing Water Line	0.2 to 2 kgf/cm <sup>2</sup>	Switzer	C01316	± 5 % of the reading	2		
39	Pressure Switch	Analog	Pneumatic Line	0.6 to 6 kgf/cm <sup>2</sup>	Switzer	C01317	± 5 % of the reading	2		
40	Pressure Switch	Analog	1 NF feed	0.2 to 2 kgf/cm <sup>2</sup>	Switzer	C01318	± 5 % of the reading	2		
41	Pressure Switch	Analog	2 NF Feed	4 to 36 kgf/cm <sup>2</sup>	Switzer	C01319	± 5 % of the reading	2		
<b>D</b>	<b>LOCATION : NEW SOLUTION PRODUCTION UNIT</b>									
42	Pressure Switch (New solution)	Analog	UNIT 1	0 - 6 kgf/cm <sup>2</sup>	Saginomiya	C11312	± 5 % of the reading	2		
43	Pressure Switch (New solution)	Analog	UNIT 2	0 - 6 kgf/cm <sup>2</sup>	Saginomiya	C11313	± 5 % of the reading	2		
<b>E</b>	<b>LOCATION : MAIN CONTROL PANEL</b>									
44	Temp Controller REX C-90	Digital	UNIT 1	(-30) - (999) °C	RKC	C11101	± 5 % of the reading	2		
45	Temp Controller DTC -1	Digital	UNIT 2	0 - 200 °C	PPI	C21102	± 5 % of the reading	2		
46	Density Controller DM-1	Digital	UNIT 1	(-1999) - (9999)	JAR	C12101	± 5 % of the reading	2		
47	Density Controller DM-1	Digital	UNIT 2	(-1999) - (9999)	JAR	C22102	± 5 % of the reading	2		

SECTION: PRE-PRINTING									
A	LOCATION : ROLLER COATER								
48	% Speedometer	Analog	RC-1	0 - 100	CROMPTON	E12601	± 2 %	2	
49	% Speedometer	Analog	RC-2	0 - 100	CROMPTON	E22602	± 2 %	2	
50	Temp Controller 2404	Digital	RC-1	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E11101	± 4° C of set temp. (100 <sup>0</sup> C - 190 <sup>0</sup> C )	2	
51	Temp Controller 2404	Digital	RC-1	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E11102	± 4° C of set temp. (100 <sup>0</sup> C - 190 <sup>0</sup> C )	2	
52	Temp Controller 2404	Digital	RC-1	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E11103	± 4° C of set temp. (100 <sup>0</sup> C - 190 <sup>0</sup> C )	2	
53	Temp Controller 2404	Digital	RC-2	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E21104	± 4° C of set temp. (100 <sup>0</sup> C - 190 <sup>0</sup> C )	2	
54	Temp Controller 2404	Digital	RC-2	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E21105	± 4° C of set temp. (100 <sup>0</sup> C - 190 <sup>0</sup> C )	2	
55	Temp Controller 2404	Digital	RC-2	(-1999)- (99999) <sup>0</sup> C	EUROTHERN	E21106	± 2 %	2	
56	Timer	Analog	RC-1	0 - 72 min	OMRON	E11801	± 15 secs at set timings (10 & 20 min.)	2	
57	Timer	Analog	RC-1	0 - 72 min	OMRON	E11802	± 15 secs at set timings (10 & 20 min.)	2	
58	Timer	Analog	RC-2	0 - 72 min	OMRON	E21803	± 15 secs at set timings (10 & 20 min.)	2	
59	Timer	Analog	RC-2	0 - 72 min	OMRON	E21804	± 15 secs at set timings (10 & 20 min.)	2	
ELECTROFORMING									
C	LOCATION : CHROMIUM BATH								
60	Temp. Controller 2216	Digital	CrB-1	2 digit	Eurotherm	E11111	± 2° C of set temp. (49 <sup>0</sup> C )	2	
61	Temp. Controller 2132	Digital	CrB-1	2 digit	Eurotherm	E11112	± 2° C of set temp. (51 <sup>0</sup> C )	2	
E	LOCATION : Ni BATH								
62	Temp. Controller 2216	Digital	NB-1	2 digit	Eurotherm	E11113	± 2° C of set temp. (46 <sup>0</sup> C )	2	
63	Temp. Controller 2132	Digital	NB-1	2 digit	Eurotherm	E11114	± 2° C of set temp. (49 <sup>0</sup> C )	2	



<b>H</b>	<b>LOCATION : DEGREASE TANK</b>									
64	Temp. Controller 2132	Digital	DT-1	2 digit	Eurotherm	E11115	± 2° C of set temp. (52 °C )	2		
65	Temp. Controller 2132	Digital	DT-1	2 digit	Eurotherm	E11116	± 2° C of set temp. (52 °C )	2		
<b>I</b>	<b>LOCATION : HCI STRIP TANK</b>									
66	Temp. Controller 2132	Digital	HCLT-1	2 digit	Eurotherm	E11117	± 2° C of set temp. (50 °C )	2		
67	Temp. Controller 2132	Digital	HCLT-1	2 digit	Eurotherm	E11118	± 2° C of set temp. (52 °C )	2		
<b>SECTION: FINISHING</b>										
<b>A</b>	<b>LOCATION : PNEUMATIC LINE</b>									
68	Pressure Switch	Analog	4F/101	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F11301	± 5 % of the reading	2		
69	Pressure Switch	Analog	8F/101	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F11303	± 5 % of the reading	2		
70	Pressure Switch	Analog	8F/102	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F21304	± 5 % of the reading	2		
71	Pressure Switch	Analog	8F/103	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F31305	± 5 % of the reading	2		
72	Pressure Switch	Analog	8F/104	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F41306	± 5 % of the reading	2		
73	Pressure Switch	Analog	8F/105	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F51307	± 5 % of the reading	2		
74	Pressure Switch	Analog	8F/106	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F61308	± 5 % of the reading	2		
75	Pressure Switch	Analog	8F/107	1 - 8 kgf/cm <sup>2</sup>	NIHAN SEIKI	F71309	± 5 % of the reading	2		
76	Temperature Controller	Digital	BPS	0-999 ° C	WATLOW	F11106	± 5 % of the reading	2		
77	Temperature Controller	Digital	BPS	0-999 ° C	CKD	F11107	± 5 % of the reading	2		
78	Temperature Controller	Digital	BPS	0-999 ° C	CKD	F11108	± 5 % of the reading	2		

<b>B</b>	<b>LOCATION : SHRINK WRAP MACHINE</b>									
79	Temperature Controller	Digital	101	0-999 ° C	S B Electronics	F11101	± 5° C of set temp. (150 C )	2		
80	Temperature Controller	Digital	102	0-999 ° C	S B Electronics	F11102	± 5° C of set temp. (150 C )	2		
81	Temperature Controller	Digital	103	0-999 ° C	S B Electronics	F11103	± 5° C of set temp. (150 C )	2		
82	Temperature Controller	Digital	104	0-999 ° C	S B Electronics	F11104	± 5° C of set temp. (150 C )	2		
83	Temperature Controller	Digital	105	0-999 ° C	S B Electronics	F11105	± 5° C of set temp. (150 C )	2		
<b>SECTION: SALVAGE</b>										
<b>LOCATION : SNRN</b>										
84	Pressure Switch	Analog	SNRN-101	0.1 - 0.8 Mpa	CKD	G11301	± 5 % of the reading	2		
85	Pressure Switch	Analog	SNRN-102	0.1 - 0.8 Mpa	CKD	G21302	± 5 % of the reading	2		
86	Pressure Switch	Analog	SNRN-103	0.1 - 0.8 Mpa	CKD	G31303	± 5 % of the reading	2		
87	Pressure Switch	Analog	SNRN-104	0.1 - 0.8 Mpa	CKD	G41304	± 5 % of the reading	2		
88	Pressure Switch	Analog	SNRN-105	0.1 - 0.8 Mpa	CKD	G51305	± 5 % of the reading	2		
89	Pressure Switch	Analog	SNRN-106	0.1 - 0.8 Mpa	CKD	G61306	± 5 % of the reading	2		

## Price Bid

ANNEXURE-I (Total -14 Pages)

Tender No: 06/ SAL / MAINT / 2018-19

Sub: Invitation of quotation for Calibration of instruments

List of instruments requiring calibration

GROUP- 'C'

Total = 20 Instruments(2 Pages)

S. No	NAME	TYPE	M/C NO.	RANGE	MAKE	CODE NO.	ACCEPTANCE CRITERIA	PERIODICITY (Yr.)	Calibration Charges at our site including taxes (other than Service tax)	Calibration Charges at your Laboratory including taxes (other than Service tax)
C	LOCATION: WIPING SOLUTION RECOVERY PLANT (GENESIS)									
1	Flow Meter	Digital	Centrifuge	60 - 7000 l/h	Burket	C03801	± 10 l/h	2		
D	LOCATION : NEW SOLUTION PRODUCTION UNIT									
E	LOCATION : MAIN CONTROL PANEL									
2	pH Monitor HB 196 K2	Analog	UNIT 1	0 - 14	DKK	C15101	± 0.5 %	2		
3	pH Monitor HB 196 K2	Analog	UNIT 2	0 - 14	DKK	C25102	± 0.5 %	2		
B	LOCATION : ROLLER ROUTER									
4	Lub Oil Pr. Gauge	Analog	RR-1	0 - 4 bar	PRECISE	E11201	± 0.2 bar	2		
5	Lub Oil Pr. Gauge	Analog	RR-2	0 - 4 bar	PRECISE	E21202	± 0.2 bar	2		
ELECTROFORMING										
C	LOCATION : CHROMIUM BATH									
6	Flow meter SK-110	Analog	UNIT-2	100 - 1000 l/h	George Fischer	E 23801	± 10 l/h	2		
7	Flow meter SK-50	Analog	UNIT-2	2.5 - 25 l/h	George Fischer	E 23802	± 5 l/h	2		
8	Flow meter SK-110	Analog	UNIT-3	100 - 1000 l/h	George Fischer	E 33801	± 10 l/h	2		
9	Flow meter SK-50	Analog	UNIT-3	2.5 - 25 l/h	George Fischer	E 33802	± 5 l/h	2		
10	pH meter	Digital	NB-1	3 digit	ADSENSORS	E12001	± 0.08 PH of set value (3.8-4.2)	2		

J	LOCATION : ETP MAIN CONTROL PANEL									
11	PH meter DPD 23	Digital	MCP-1	0 - 14 PH	ADSENSORS	E12002	± 0.08 PH of set value (1.5-3.0)	2		
12	PH meter DPD 23	Digital	MCP-1	0 - 14 PH	ADSENSORS	E12003	± 0.08 PH of set value (6.0-9.0)	2		
13	PH meter DRD 23	Digital	MCP-1	± 1999 mV	ADSENSORS	E12004	± 40 mV os set point (200-335 mV)	2		
<b>SECTION: STP</b>										
14	Pressure Gauge	Analog	STP-II (Air Blower)	0 - 2.5 kgf/cm <sup>2</sup>	WIKA Instruments	U21201	± 5%	1		
15	Pressure Gauge	Analog	STP-II (Treated)	0 - 10 kgf/cm <sup>2</sup>	AN Instruments	U21202	± 5%	1		
16	Flow meter (Sl.No. 56135)	Analog	Output of PSF Pump	1500 LP / hr (Min starting flow)	DASMESH	U03801	± 2%	1		
17	Flow meter (Sl.No. 55311)	Analog	Output of Treated Pump	1500 LP / hr (Min starting flow)	DASMESH	U03802	± 2%	1		
<b>SECTION: PUMP HOUSE</b>										
18	Flow meter	Analog	Filter water pump (Township Pump house)	0 - 250 m <sup>3</sup> / hr	Levcon	V03801	± 5%	1		
19	Flow meter	Analog	Plant Pump House	0 - 300 m <sup>3</sup> / hr	Levcon	V03802	± 5%	1		
20	Flow meter (Sl.No. 57100)	Analog	Inlet of WSTP (Process)	450 LP / hr (Min starting flow)	DASMESH	V03803	± 2%	1		

Tender No : 06 / SAL / MAINT / 2018-19

Sub: Invitation of quotation for Calibration of instrumentsList of instruments requiring calibration

GROUP- 'D'

Total = 43 Instruments (3 Pages)

S. No	NAME	TYPE	M/C NO.	RANGE	MAKE	CODE NO.	ACCEPTANCE CRITERIA	PERIODICITY (Yr.)	Calibration Charges at our site including taxes (other than Service tax)	Calibration Charges at your Laboratory including taxes (other than Service tax)
<b>ELECTROFORMING</b>										
C	LOCATION : CHROMIUM BATH									
1	Voltmeter	Analog	CrB-1	0 - 500 V	CELSA	E15301	± 2.5%	1		
2	Ammeter	Analog	CrB-1	0 - 200 A	CELSA	E15401	± 2.5%	1		
D	LOCATION : RECTIFIER NO 1 (Cr BATH)									
3	Voltmeter	Analog	NB-1	0 - 500 V	CELSA	E15302	± 2.5%	1		
4	Ammeter	Analog	NB-1	0 - 150 A	CELSA	E15402	± 2.5%	1		
E	LOCATION : Ni BATH									
5	Voltmeter	Analog	NB-1	0 - 500 V	CELSA	E15303	± 2.5%	1		
6	Ammeter	Analog	NB-1	0 - 150 A	CELSA	E15403	± 2.5%	1		
F	LOCATION : RECTIFIER NO 1(Ni BATH)									
7	Voltmeter	Analog	Rect-1	0 - 25 V	CELSA	E15304	± 2.5%	1		
8	Ammeter	Analog	Rect-1	0 - 1500 A	CELSA	E15404	± 2.5%	1		
G	LOCATION : RECTIFIER NO 2(Ni BATH)									
9	Voltmeter	Analog	Rect-1	0 - 25 V	CELSA	E25305	± 2.5%	1		
10	Ammeter	Analog	Rect-1	0 - 1500 A	CELSA	E25405	± 2.5%	1		
K	MISCELLANEOUS									
11	Tensile strength Equipment	Digital		5 KN	HOUSFIELD	E04001	± 0.5 % of the indicated load	1		
12	Shore Hardness Tester	Analog		0 - 100 <sup>0</sup> D	Teclock	E01503	± 2 <sup>0</sup> D	1		
13	Weighing Machine	Digital		0.5 gm - 34 Kg.	SARTORIUS	E03301	± 1 gm.	1		

SECTION: MEASURING INSTRUMENTS									
14	Depth gauge	Analog		0-100 mm	MITUTOYA	J04301	± 20 microns	1	
15	Radiation thermometer			(-)18 to 870 °C	RAYTEK	B04601	± 2 % of the range	1	
16	Megger	Analog		0-500V		L04701	± 5 % of the range	1	
17	Lux meter TES 1332	Digital		200 -200000 Lux	TES	Q 03001	± 5 % of the range	1	
18	Pen Type Temperature & Humidity Meter	Digital		RH - 2 - 98 % Temp. - 0 - 50		T05801	RH = ± 5 % Temp. = ± 1° C	1	
19	Sound Level meter RO - 1350	Digital		A LO 35 - 95 db, A HI 75 - 130 db, C LO 35 - 90 db, C HI 75 - 130 db	Roline	Q03101	± 5 % of the reading	1	
20	Sound Level meter RO - 1350	Digital		A LO 35 - 95 db,A HI 75 - 130 db, C LO35-90db C HI 75- 30 db	Roline	L03102	± 5 % of the reading	1	
21	Megger	Analog		0-500V	YOKOGAW A	B04701	± 5 % of the range	1	
22	Digital Vernier Calliper-711 Digital	Digital		0-150 mm	GEDORE	D01603	± 20 microns	1	
SECTION: MSDS									
23	Voltmeter	Analog	RRCP-1	0 -8 kv	AE	R05301	± 2.5%	1	
24	Voltmeter	Analog	RRCP-2	0 - 40 KV	AE	R05302	± 2.5%	1	
25	Voltmeter	Analog	RRCP-3	0 - 40 KV	AE	R05303	± 2.5%	1	
26	Voltmeter	Analog	RRCP-4	0 - 8 KV	AE	R05304	± 2.5%	1	
27	Voltmeter	Analog	Oil Insulation Test Set	0 - 72 KV	AE	R05309	± 2.5%	1	
28	Ammeter	Digital	CTZM Test Kit	4 digit	-	R05406	± 2.5%	1	
29	Timer	Digital	CTZM Test Kit	4 digit	-	R01801	± 2.5%	1	
30	Ammeter	Analog	Over Cur. Relay Tester	0 - 2.5 A	AE	R05407	± 2.5%	1	
31	Timer	Digital	Over Cur. Relay Tester	3 digit	-	R01802	± 2.5%	1	
32	Megger	Analog	-	0 - 2500 V 5000V	Cambridge Engineering	R04701	± 5 % of the range	1	

<b>SECTION: DG</b>									
33	KW Meter	Analog	DGCP-1	0 - 3000 KW	AE	S05601	± 2.5%	1	
34	KW Meter	Analog	DGCP-2	0 - 3000 KW	IML	S05602	± 2.5%	1	
35	KW Meter	Analog	DGCP-3	0 - 3000 KW	IML	S05603	± 2.5%	1	
36	Voltmeter	Analog	DGCP-1	0 - 7.2 KV	IML	S05301	± 2.5%	1	
37	Voltmeter	Analog	DGCP-2	0 - 7.2 KV	IML	S05302	± 2.5%	1	
38	Voltmeter	Analog	DGCP-3	0 - 7.2 KV	IML	S05303	± 2.5%	1	
<b>SECTION: PAPER TESTING LAB (QAT)</b>									
39	Temperature & Humidity Meter	Digital		RH - 2 - 98 % Temp. - 0 - 50 °c	ZEAL	W05801	RH = ± 2%      Temp. = ± 1° C	1	
40	Temperature & Humidity Meter	Digital		RH - 2 - 98 % Temp. - 0 - 50°c	HTC-1	W05802	RH = ± 2%      Temp. = ± 1° C	1	
41	Temperature & Humidity Meter	Digital		RH - 2 - 98 % Temp. - 0 - 50°c	HTC-1	W05803	RH = ± 2%      Temp. = ± 1° C	1	
42	Hygrometer	Digital	20139159	RH - 2 - 100 % Temp. - 0 - 60°c	Retronics	W05804	RH = ± 2%      Temp. = ± 1° C	1	
43	Micrometer	Digital	MDC - 25SX	0 - 25 mm	Mitutoyo	W01701	± 0.001 mm	1	