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ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

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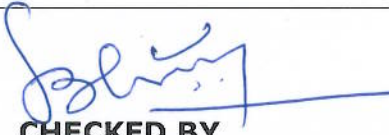
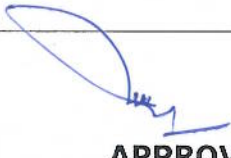
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TEST REPORT

SHEET: 1 of 16

NAME & ADDRESS OF CUSTOMER: KEC INTERNATIONAL LTD. (Cables Division) Plot No. 803, Samlaya-Savli Road, Village Godampura, Taluka -Savli, Vadodara, Gujarat - 391520	REPORT NO.: HCCT/05/2189 DATE : 04.01.2013	
SAMPLE DESCRIPTION: 3 Core X 300 sq. mm. HT XLPE insulated and black coloured PVC FRLS outer sheathed armoured cable Cable code : 2XWY(P) Voltage Grade : 6.6/6.6 kV(UE) Class of Copper conductor : 2 Type of insulation : XLPE Type of PVC outer sheath : ST-2	CUSTOMER REF.NO	DATE
	Nil	07.11.2012
	DATE OF SAMPLE RECEIPT	DATE OF TESTING
TEST DETAILS: As per sheet No. 2 of 16 & 3 of 16	SAMPLE IDENTIFICATION: ERDA SAMPLE CODE NO. : HCCT-1023 EMBOSSING: KEC INTERNATIONAL LTD (RPG) ASIAN 6.6/6.6 (UE) ELECTRIC CABLE 3 X 300 Sq.mm XLPE 2XWY(P) 2012 FRLS UID NO.0218 TEST SPECIFICATION: IS: 7098 (Pt.2)-1985, ASTM D 2863-2000, IEC 60754-1-1994, As per customer's requirement testing procedure was followed as per IEC: 60332-3-23-2000 & ASTM D 2843-1999.	
TEST RESULTS: As per sheet No. 4 of 16 to 16 of 16.		
ENCLOSURE: I) Annexure - 1 (Sheet 1 to 4 - Impulse Waveforms) II) Annexure - 2 (Sheet 1 to 1 - Photographs of Test sample)		
REMARKS: The sample conforms to the requirement of the above mentioned test specification with respect to the tests carried out.		
 PREPARED BY	 CHECKED BY	 APPROVED BY
Note: 1. This report relates only to the particular sample received for testing in good condition at ERDA. 2. This report cannot be reproduced in part under any circumstances. 3. Publication of this report requires prior permission in writing from Director, ERDA. 4. Only the tests asked for by the customer have been carried out.		



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REPORT NO. : HCCT/05/2189

SHEET: 2 of 16

DATE : 04.01.2013

TEST DETAILS : IS:7098 (Part 2)-1985, ASTM D 2863-2000, IEC:60754-1-994,
As per customer's requirement testing procedure was followed as per
IEC: 60332-3-23-2000, ASTM D 2843-1999 .

SR. NO.	CL. NO.	TEST PARTICULARS
1	18.1.a of IS : 7098(Pt.2)	Test on conductor
2	18.1 b of IS : 7098(Pt.2)	Tests for round steel wire armour
3	18.1.c of IS : 7098(Pt.2)	Test for thickness of Insulation and Sheath
4	18.1.d of IS : 7098(Pt.2)	Physical tests for Insulation
5	18.1.e of IS : 7098(Pt.2)	Physical tests for Outer sheath
6	18.1.k of IS : 7098(Pt.2)	Insulation resistance (volume resistivity)
7	18.1.q of IS : 7098(Pt.2)	Flammability test
8	ASTM D 2863-2000	Oxygen Index test
9	ASTM D 2863-2000	Temperature Index test
10	As per customer's requirement testing procedure was followed as per Cl.No.5 of IEC:60332-3-23-2000	Test for vertical flame spread of vertically mounted bunched cables- category B
11	As per customer's requirement and following test procedure given by the customer	Anti rodent and termite repulsion test

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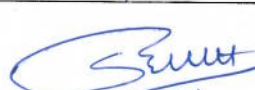

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REPORT NO. : HCCT/05/2189		SHEET: 3 of 16
DATE : 04.01.2013		
12	IEC 60754-1-1994	Determination of amount of halogen acid gas
13	As per customer's requirement testing procedure was followed as per ASTM D 2843-1999	Smoke Density test
14	18.1.g of IS : 7098(Pt.2)	Partial discharge test
15	18.1.h of IS : 7098(Pt.2)	Bending test
16	18.1.j of IS : 7098(Pt.2)	Dielectric power factor test
17	18.1.m of IS : 7098(Pt.2)	Heating cycle test
18	18.1.n of IS : 7098(Pt.2)	Impulse Withstand test
19	18.1.p of IS : 7098(Pt.2)	High Voltage test
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REPORT NO. : HCCT/05/2189

SHEET: 4 of 16

DATE : 04.01.2013

TEST RESULTS:

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
1	Test on conductor: [Cl. No. 18.1.a of IS:7098 (Part 2) - 1985] (iv) Resistance test (Corrected at 20°C), ohm/km	Max. 0.0601	Red 0.0593 Yellow 0.0587 Blue 0.0593	Conforms
2	Tests for round steel wires armour: [Cl. No. 18.1.b of IS : 7098 (Part 2) - 1985] 1) Diameter, mm 2) Physical tests on round wires: (i) Tensile strength, N/mm ² (ii) Elongation , % (iii) Torsion test for round wires (iv) Winding test (v) Uniformity of zinc coating (vi) Mass of zinc coating, gm/m ² (vii) Resistivity, ohm-cm (Corrected at 20°C)	3.15 ± 0.080 Max. 580 Min. 250 Min. 6 To withstand 19 numbers of turns in 150 mm gauge length without break Not applicable No red scale shall be observed Min. 114 Max. 14.5 X 10 ⁻⁶	3.106 448 15 Wire did not break Not applicable No red scale was observed 125 14.0 X 10 ⁻⁶	Conforms Conforms Conforms Conforms - Conforms Conforms Conforms

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**REPORT NO. : HCCT/05/2189****SHEET: 5 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
3	Tests for thickness of insulation & sheath: [Cl. No. 18.1.c of IS : 7098 (Part 2) - 1985] -Thickness, mm A] Insulation B] Inner sheath C] Outer sheath	Nom. / Min. 3.6 / 3.14 Min. 0.7 Min. 2.84	Red 4.1/ 3.85 Yellow 4.1/ 3.82 Blue 4.1/ 3.83 0.9 2.90	Conforms Conforms Conforms
4	Physical tests for insulation: [Cl. No. 18.1.d of IS : 7098 (Part 2) - 1985] (i) Tensile strength and elongation at break - Tensile strength, N/mm ² - Elongation at break, % (ii) Ageing in air oven (At 135 ± 3°C for 7 days) Variation, % - Tensile strength - Elongation at break	Min. 12.5 Min. 200 Max. ± 25 Max. ± 25	Red 14.2 Yellow 13.9 Blue 13.7 Red 563 Yellow 545 Blue 525 Red + 17 Yellow + 16 Blue + 19 Red + 4 Yellow + 6 Blue + 7	Conforms Conforms Conforms Conforms

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**REPORT NO. : HCCT/05/2189****SHEET: 6 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
	(iii) Hot set test (at $200 \pm 3^{\circ}\text{C}$ for 15 minutes) - Elongation under load, %	Max. 175	Red 123 Yellow 125 Blue 133	Conforms
	- Permanent Elongation (set), %	Max. 15	Red 10 Yellow 10 Blue 10	Conforms
	(iv) Shrinkage test (At $130 \pm 3^{\circ}\text{C}$ for 1 hour) - Shrinkage, %	Max. 4	Red 0.34 Yellow 0.44 Blue 0.39	Conforms
	(v) Water absorption test (Gravimetric) (at $85 \pm 2^{\circ}\text{C}$ for 14 days) - Water absorbed, mg/cm^2	Max. 1	Red 0.03 Yellow 0.02 Blue 0.03	Conforms
5	Physical tests for outer sheath: [Cl. No. 18.1.e of IS : 7098 (Part 2) -1985] (i) Tensile Strength and Elongation at break - Tensile strength, N/mm^2 - Elongation at break, %	Min. 12.5 Min. 150	17.3 193	Conforms Conforms


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DATE : 04.01.2013

SHEET: 7 of 16

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
	(ii) Ageing in air oven (at $100 \pm 2^\circ\text{C}$ for 7 days)			
	- Tensile strength, N/ mm^2	Min. 12.5	15.8	Conforms
	- Elongation at break, %	Min. 150	205	Conforms
	Variation, %			
	- Tensile strength	Max. ± 25	- 9	Conforms
	- Elongation at break	Max. ± 25	+ 6	Conforms
	(iii) Shrinkage test (At $150 \pm 2^\circ\text{C}$ for 15 min.)			
	- Shrinkage, %	Max. 4	0.98	Conforms
	(iv) Hot deformation test (At $80 \pm 2^\circ\text{C}$ for 6 hours)			
	- Depth of indentation, %	Max. 50	28.8	Conforms
	(v) Loss of Mass in air oven (At $100 \pm 2^\circ\text{C}$ for 7 days)			
	- Loss of mass, mg/ cm^2	Max. 2	0.54	Conforms
	(vi) Heat shock test (at $150 \pm 2^\circ\text{C}$ for 1 hour)	No sign of crack or scale shall be observed	No sign of crack or scale was observed	Conforms
	(vii) Thermal stability test (At 200°C), minutes	Min. 80	> 180	Conforms

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REPORT NO. : HCCT/05/2189

SHEET: 8 of 16

DATE : 04.01.2013

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
6	Insulation resistance: [Cl. No. 18.1.k of IS : 7098 (Part 2) - 1985] Volume Resistivity, ohm-cm - At 27°C - At 90°C	Min. 1×10^{14} Min. 1×10^{12}	Red 6.1×10^{16} Yellow 3.0×10^{16} Blue 2.4×10^{16} Red 2.3×10^{15} Yellow 3.2×10^{15} Blue 2.9×10^{15}	Conforms Conforms
7	Flammability test: [Cl. No. 18.1.q of IS : 7098 (Part 2) - 1985] - Period of burning after removal of flame, seconds - Unaffected portion from the lower edge of the top Clamp, mm.	Max. 60 Min. 50	0 355	Conforms Conforms
8	Oxygen Index tests : [ASTM D 2863-2000] (A) Description of sample	-	Physically self supporting strips cut from a molded sheet prepared from outer sheath of cable.	-

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**REPORT NO. : HCCT/05/2189****SHEET: 9 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
	(B) Specimen dimension, mm			
	(i) Length	70 to 150	100	-
	(ii) Width	6.5 ± 0.5	6.3	-
	(iii) Thickness	3.0 ± 0.25	3.22	-
	(C) Individual oxygen index, %			
	(i) 1st trial	-	35.3	-
	(ii) 2nd trial	-	35.2	-
	(iii) 3rd trial	-	35.2	-
	(D) Average oxygen index, %	-	35.2	-
	(E) Any behavior observed	-	Bending was observed	-
9	Temperature Index tests: [ASTM D 2863-2000]			
	(A) Description of sample	-	Physically self supporting strips cut from a molded sheet prepared from outer sheath of cable.	-
	(B) Specimen dimension, mm			
	(i) Length	70 to 150	100	-
	(ii) Width	6.5 ± 0.5	6.3	-
	(iii) Thickness	3.0 ± 0.25	3.22	-
	(C) Graph of oxygen index v/s Temperature °C	-	Please see Graph. 1	-
	(D) Temperature Index, °C	-	355	-
	(E) Any behavior observed	-	Bending was observed	-
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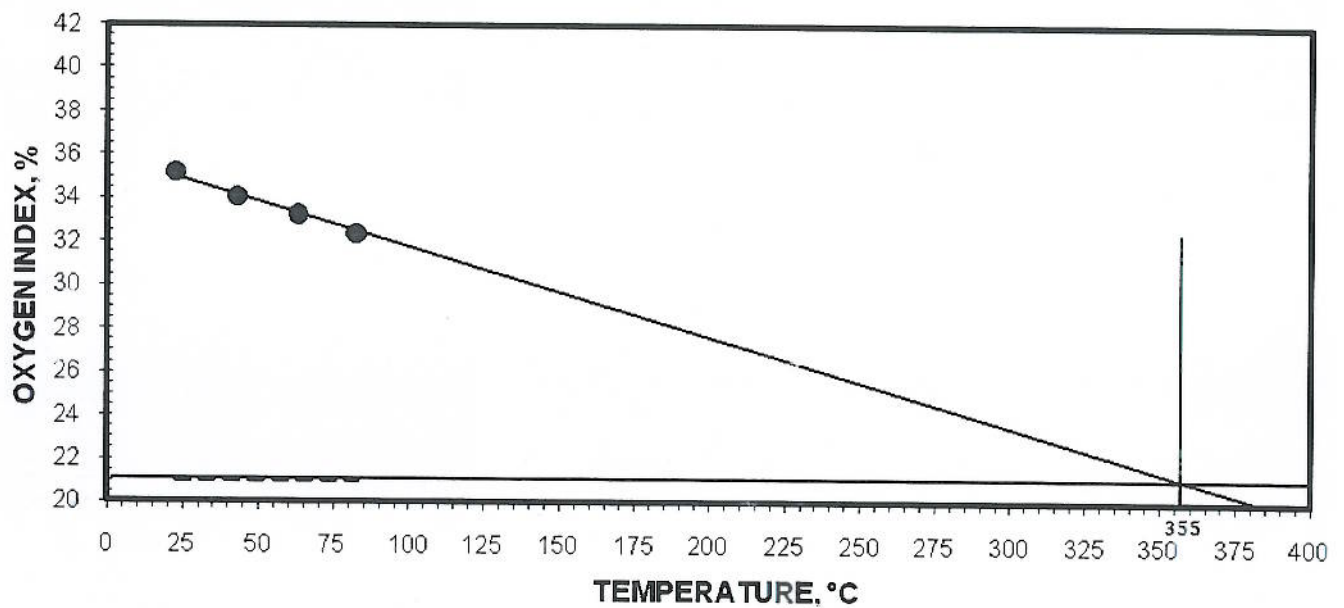
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SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
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Graph.1: Oxygen index (%) V/S Temperature (°C)



10#	Test for vertical flame spread of vertically mounted bunched cables- category B: [As per customer's requirement testing procedure was followed as per Cl.No. 5 of IEC: 60332-3-23-2000] -Charred portion from the bottom edge of the burner, meter	Max. 2.5	0.70	Conforms
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"#" LPG was used as a flame fuel as requested by the customer instead of propane gas.

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**REPORT NO. : HCCT/05/2189****SHEET: 11 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
11*	Anti rodent and termite repulsion test: [As per customer's requirement and following test procedure given by the customer]	Formation of black precipitate shall be observed Which indicate the presence of lead in PVC	Formation of black precipitate was observed Which indicate the presence of lead in PVC	Conforms
12	Determination of amount of halogen acid gas: [IEC 60754-1-1994] - Amount of halogen acid, mg of hydrochloric acid per gm of sample	-	187	-
13#	Smoke Density test: [As per customer's requirement ASTM D 2843-1999] (A)Description of sample (B)Specimen dimension, mm (i) Length (ii) Width (iii) Thickness	- 25.4 ± 0.3 25.4 ± 0.3 6.2 ± 0.3	Cube sample cut from molded sheet prepared from outer sheath of the cable. 25.4 25.5 6.3	- - - -

** This test is not covered under NABL scope.

LPG was used as a flame fuel as requested by the customer instead of propane gas.

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**REPORT NO. : HCCT/05/2189****SHEET: 12 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS																																																																																														
	(C) Light absorption at 15 sec interval																																																																																																	
	<table border="1"> <thead> <tr> <th rowspan="2">Time, Sec.</th><th colspan="4">Light absorption, %</th></tr> <tr> <th>Specimen 1</th><th>Specimen 2</th><th>Specimen 3</th><th>Average</th></tr> </thead> <tbody> <tr><td>0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td></tr> <tr><td>15</td><td>2.3</td><td>3.1</td><td>2.7</td><td>2.7</td></tr> <tr><td>30</td><td>4.6</td><td>4.3</td><td>4.9</td><td>4.6</td></tr> <tr><td>45</td><td>7.2</td><td>8.4</td><td>5.8</td><td>7.1</td></tr> <tr><td>60</td><td>8.2</td><td>10.4</td><td>9.1</td><td>9.2</td></tr> <tr><td>75</td><td>9.6</td><td>11.2</td><td>10.6</td><td>10.5</td></tr> <tr><td>90</td><td>12.1</td><td>14</td><td>13.2</td><td>13.1</td></tr> <tr><td>105</td><td>14.7</td><td>14.6</td><td>15.0</td><td>14.8</td></tr> <tr><td>120</td><td>19.6</td><td>17.6</td><td>18.7</td><td>18.6</td></tr> <tr><td>135</td><td>23.1</td><td>21.8</td><td>22.8</td><td>22.6</td></tr> <tr><td>150</td><td>29.8</td><td>26.1</td><td>28</td><td>28.0</td></tr> <tr><td>165</td><td>32.5</td><td>30.7</td><td>31.9</td><td>31.7</td></tr> <tr><td>180</td><td>34.6</td><td>33.7</td><td>35</td><td>34.4</td></tr> <tr><td>195</td><td>42.2</td><td>43.0</td><td>42.7</td><td>42.6</td></tr> <tr><td>210</td><td>43.5</td><td>44.6</td><td>44.3</td><td>44.1</td></tr> <tr><td>225</td><td>44.9</td><td>45.5</td><td>44.7</td><td>45.0</td></tr> <tr><td>240</td><td>47.3</td><td>48.0</td><td>47.8</td><td>47.7</td></tr> </tbody> </table>	Time, Sec.	Light absorption, %				Specimen 1	Specimen 2	Specimen 3	Average	0	0.0	0.0	0.0	0.0	15	2.3	3.1	2.7	2.7	30	4.6	4.3	4.9	4.6	45	7.2	8.4	5.8	7.1	60	8.2	10.4	9.1	9.2	75	9.6	11.2	10.6	10.5	90	12.1	14	13.2	13.1	105	14.7	14.6	15.0	14.8	120	19.6	17.6	18.7	18.6	135	23.1	21.8	22.8	22.6	150	29.8	26.1	28	28.0	165	32.5	30.7	31.9	31.7	180	34.6	33.7	35	34.4	195	42.2	43.0	42.7	42.6	210	43.5	44.6	44.3	44.1	225	44.9	45.5	44.7	45.0	240	47.3	48.0	47.8	47.7			
Time, Sec.	Light absorption, %																																																																																																	
	Specimen 1	Specimen 2	Specimen 3	Average																																																																																														
0	0.0	0.0	0.0	0.0																																																																																														
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240	47.3	48.0	47.8	47.7																																																																																														
	(D) Plot of average light absorption Vs time	-	Please see Graph. 2	-																																																																																														
	(E) Maximum smoke density, %	-	47.7	-																																																																																														
	(F) Smoke density rating, %	-	22.1	-																																																																																														
	(G) Observation of obscurement of EXIT sign	-	Visible throughout the test	-																																																																																														
	(H) Any behavior observed	-	Charring was observed	-																																																																																														

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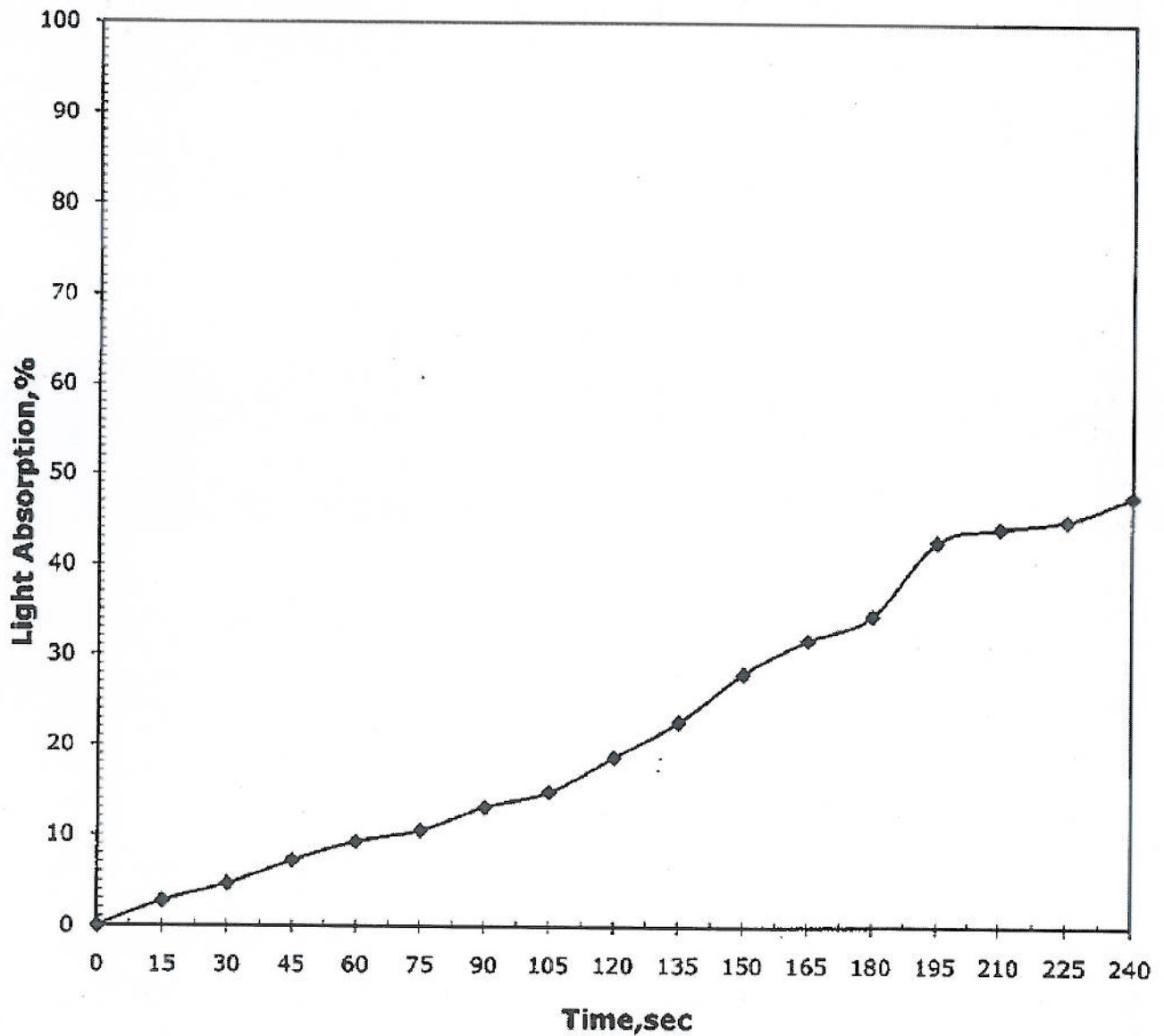


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DATE : 04.01.2013

SHEET: 13 of 16

Graph.2: Light Absorption (%) V/S Time (Sec.)



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**REPORT NO. : HCCT/05/2189****SHEET: 14 of 16****DATE : 04.01.2013**

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
14	Partial discharge test: [Cl. No. 18.1.g of IS : 7098 (Part 2) - 1985] - At 1.5U ₀ (i.e.: 9.9 kV) Where, U ₀ = 6.6 kV	Max. 20 pC	Red 1 pC Yellow 1 pC Blue 1 pC	Conforms
15	Bending test: [Cl. No. 18.1.h of IS : 7098 (Part 2) - 1985] -Partial discharge test after bending test : [Cl. No. 18.1.g of IS : 7098 (Part 2) - 1985] - At 1.5U ₀ (i.e.: 9.9 kV) Where, U ₀ = 6.6 kV	The sample shall be subjected to 3 bending cycles. The sample shall conform the partial discharge test after bending test. Max. 20 pC	The sample was subjected to 3 bending cycles. After completion of bending test, sample was subjected to Partial discharge test Red 1 pC Yellow 1 pC Blue 1 pC	Conforms Conforms
16	Dielectric power factor test: [Cl. No. 18.1.j of IS : 7098 (Part 2) - 1985] [i] As a function of voltage: - At U ₀ (i.e : 6.6 kV) - Rise from 0.5U ₀ to 2U ₀ Where, U ₀ = 6.6 kV	Max. 0.004 Max. 0.002	Red 0.000180 Yellow 0.000150 Blue 0.000166 Red 0.00003 Yellow 0.00003 Blue 0.00003	Conforms Conforms


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REPORT NO. : HCCT/05/2189

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DATE : 04.01.2013

SR. NO.	PARTICULARS OF TESTS AND CL. NO.	REQUIREMENT AS PER SPECIFICATIONS	OBTAINED VALUE	REMARKS
	[ii] As a function of temperature: - At an ambient temp. & At 2 kV - At max. Conductor temp.(90°C) at 2 kV	Max. 0.004 Max. 0.008	Red 0.000160 Yellow 0.000129 Blue 0.000145 Red 0.000481 Yellow 0.000338 Blue 0.000345	Conforms Conforms
17	Heating cycle test: [Cl. No. 18.1.m of IS : 7098 (Part 2) - 1985] - Partial discharge test after heating cycle: [Cl. No. 18.1.g of IS : 7098 (Part 2) - 1985] - At 1.5U ₀ (i.e.: 9.9 kV) Where, U ₀ = 6.6 kV - Dielectric power factor after heating cycle: [Cl. No. 18.1.j of IS : 7098 (Part 2) - 1985] - At U ₀ (i.e. : 6.6 kV) - Rise from 0.5 U ₀ to 2 U ₀ Where, U ₀ = 6.6 kV	The sample shall be subjected to 3 cycles (including 2 hrs. heating followed by 4 hrs. cooling in natural air). Sample shall conform to the partial discharge & dielectric power factor test after heating cycle test. Max. 20 pC Max. 0.004 Max. 0.002	The sample was subjected to 3 heating cycles. After completion of 3 rd cycle, sample was subjected to Partial discharge and Dielectric power factor test Red 1 pC Yellow 1 pC Blue 1 pC Red 0.000151 Yellow 0.000150 Blue 0.000168 Red 0.000017 Yellow 0.000018 Blue 0.000025	Conforms Conforms Conforms Conforms

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REPORT NO. : HCCT/05/2189

SHEET: 16 of 16

DATE : 04.01.2013

12	Impulse withstand test: [Cl. No. 18.1.n of IS : 7098 (Part 2) - 1985]	Sample shall withstand 75 kV without breakdown for 10 +ve & 10 -ve shots	Please refer Annexure - 1 for detail results.	Conforms
13	High voltage test: [Cl. No. 18.1.p of IS : 7098 (Part 2) - 1985]	Sample shall withstand power frequency voltage of 3U _o (i.e.: 19.80 kV) for 4 hours without any breakdown	All the three cores withstood the applied voltage of 3U _o (i.e.: 19.80 kV) for 4 hours satisfactorily.	Conforms

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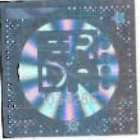
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ANNEXURE - 1

TEST REPORT No.: HCCT/05/2189
DATE : 04/01/2013

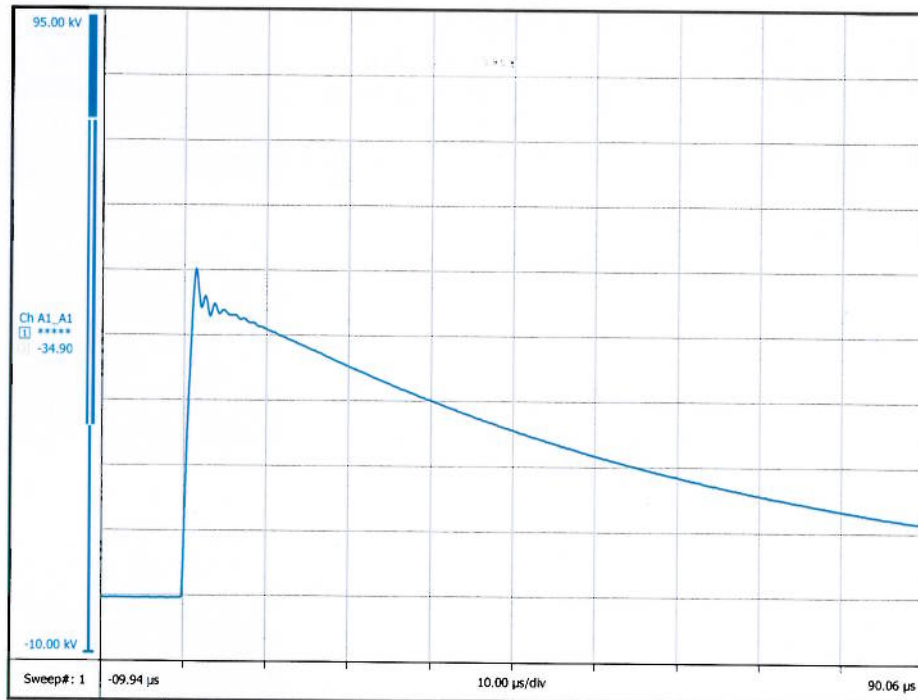
SHEET No.: 1 OF 4

LIGHTNING IMPULSE VOLTAGE WITHSTAND TEST ON H. T. XLPE CABLE

TEST PARAMETERS:

SIZE OF CABLE : 3C X 300 sq. mm
VOLTAGE GRADE : 6.6/6.6 kV (UE)
TEST VOLTAGE : 75 kVp
AMBIENT TEMPERATURE : 30.5 °C
TEST TEMPERATURE : 95.0 °C
No. OF SHOTS APPLIED : 10 +VE & 10 -VE POLARITY SHOTS/PHASE
SHOTS RECORDED : CALIBRATION PULSE, FIRST & TENTH SHOT BOTH POLARITY EACH PHASE

CALIBRATION PULSE



T1 1.470 μs

T2 44.55 μs

Up 50.71 kV

TE1099286

Prum
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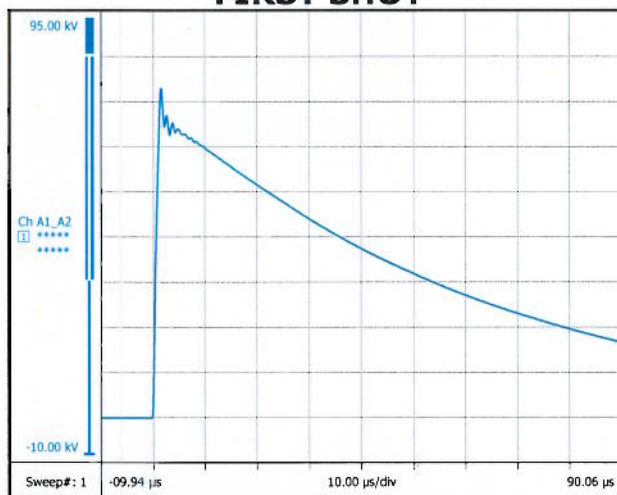


TEST REPORT No.: HCCT/05/2189
DATE : 04/01/2013

SHEET No.: 2 OF 4

LIGHTNING IMPULSE VOLTAGE WITHSTAND TEST ON H. T. XLPE CABLE (R-PHASE)

FIRST SHOT

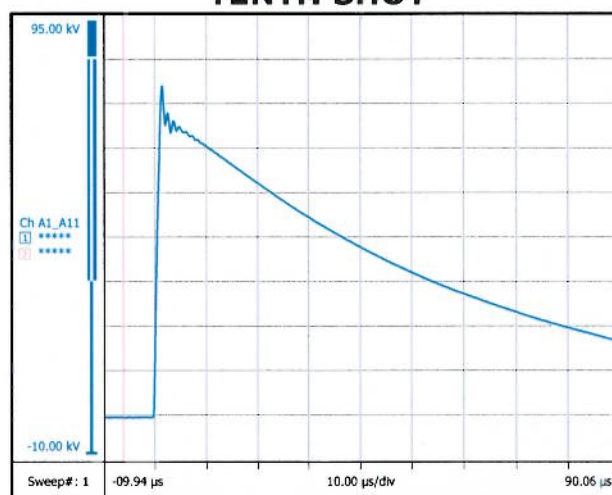


T1 1.473 μs

T2 44.66 μs

Up 73.61 kV

TENTH SHOT



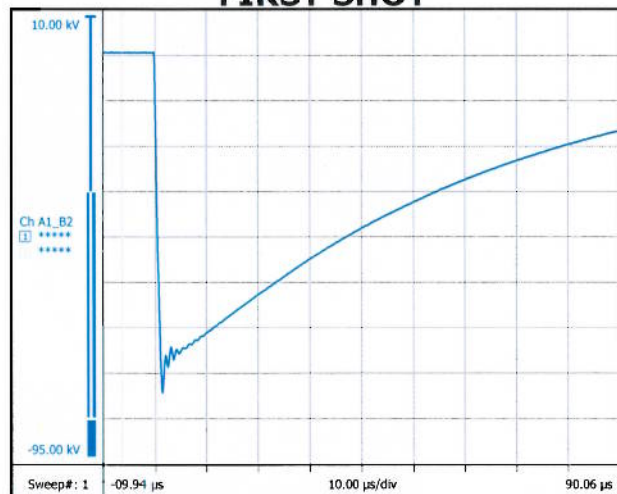
T1 1.476 μs

T2 44.64 μs

Up 74.60 kV

NEGATIVE POLARITY

FIRST SHOT

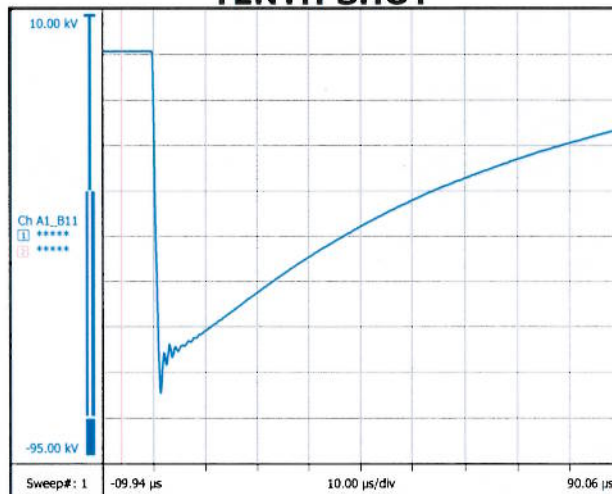


T1 1.473 μs

T2 45.16 μs

Up -75.47 kV

TENTH SHOT



T1 1.476 μs

T2 44.70 μs

Up -75.73 kV

TE1099586

Prum
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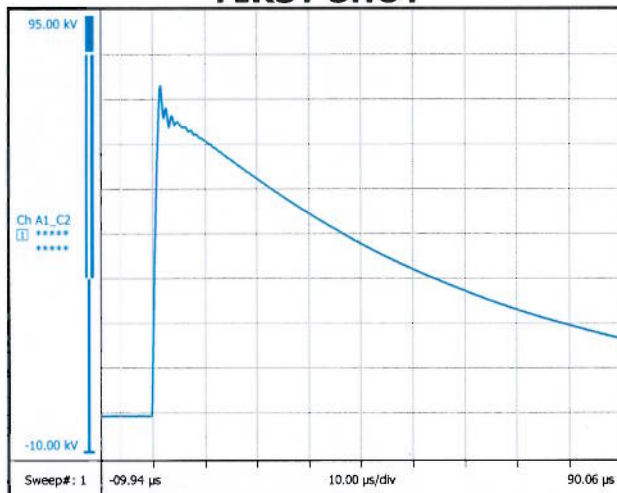
TEST REPORT No.: HCCT/05/2189
DATE : 04/01/2013

SHEET No.: 3 OF 4

LIGHTNING IMPULSE VOLTAGE WITHSTAND TEST ON H. T. XLPE CABLE (Y-PHASE)

POSITIVE POLARITY

FIRST SHOT

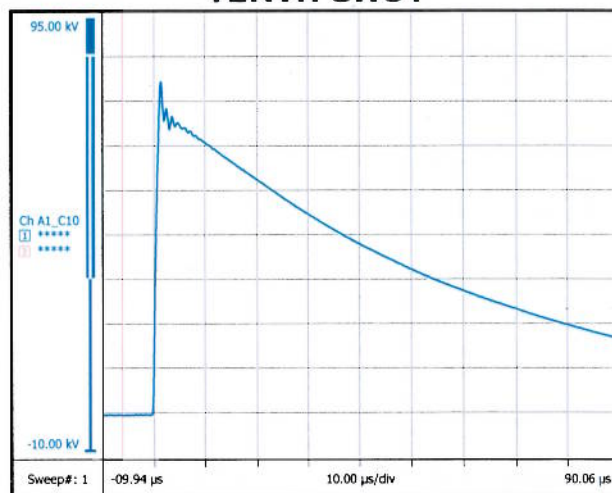


T1 1.482 μs

T2 45.40 μs

Up 74.20 kV

TENTH SHOT



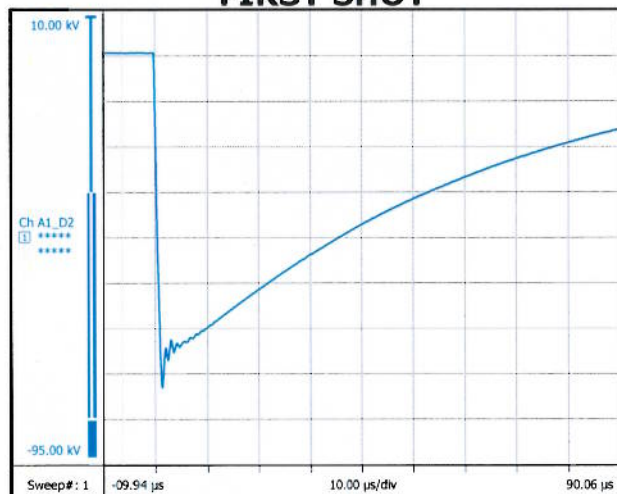
T1 1.464 μs

T2 44.77 μs

Up 75.32 kV

NEGATIVE POLARITY

FIRST SHOT

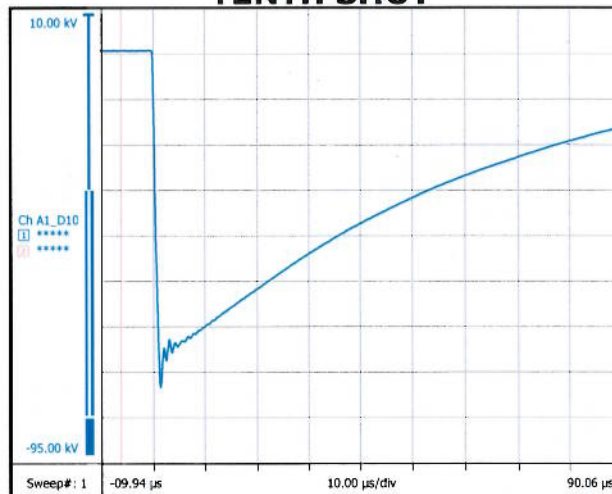


T1 1.463 μs

T2 44.86 μs

Up -74.13 kV

TENTH SHOT



T1 1.464 μs

T2 44.71 μs

Up -75.57 kV

TE1099587


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TEST REPORT No.: HCCT/05/2189
DATE : 04/01/2013

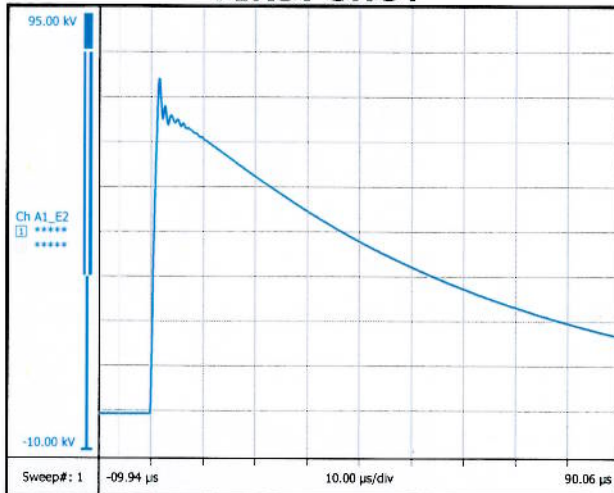
SHEET No.: 4 OF 4

LIGHTNING IMPULSE VOLTAGE WITHSTAND TEST ON H. T. XLPE CABLE (B-PHASE)

FIRST SHOT

POSITIVE POLARITY

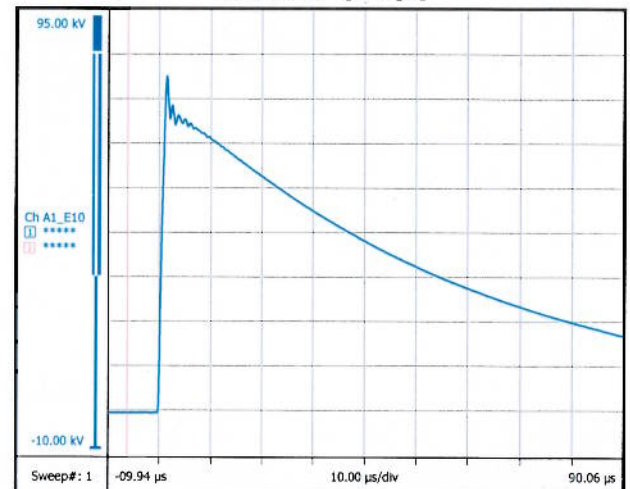
TENTH SHOT



T1 1.482 μs

T2 45.40 μs

Up 74.20 kV



T1 1.460 μs

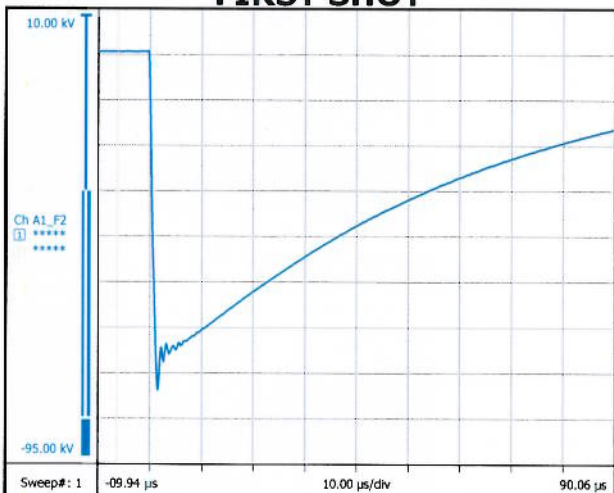
T2 44.69 μs

Up 74.95 kV

NEGATIVE POLARITY

FIRST SHOT

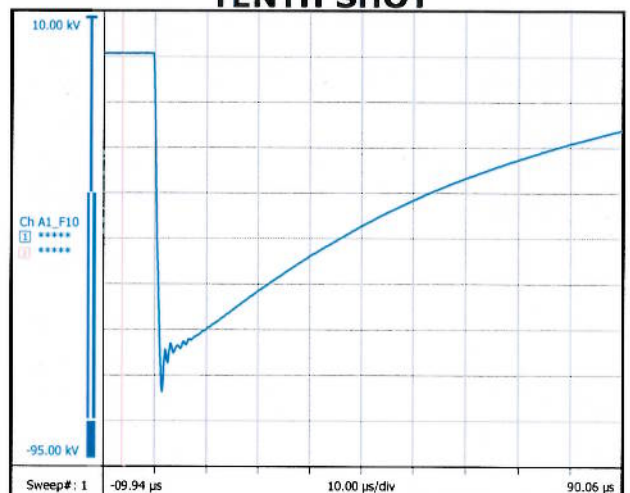
TENTH SHOT



T1 1.459 μs

T2 45.29 μs

Up -74.56 kV



T1 1.472 μs

T2 44.70 μs

Up -75.31 kV

REMARKS: The above sample "**CONFORMS**" to the requirements of aforesaid reference standard with respect to the test carried out.


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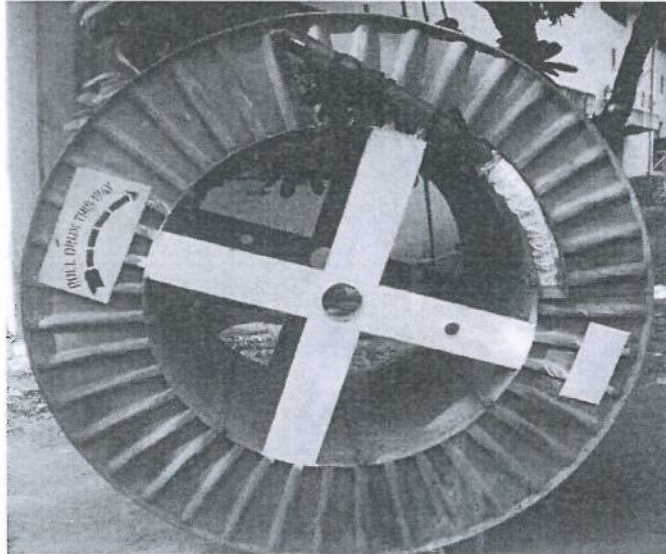
TE1099291

Annexure – 2

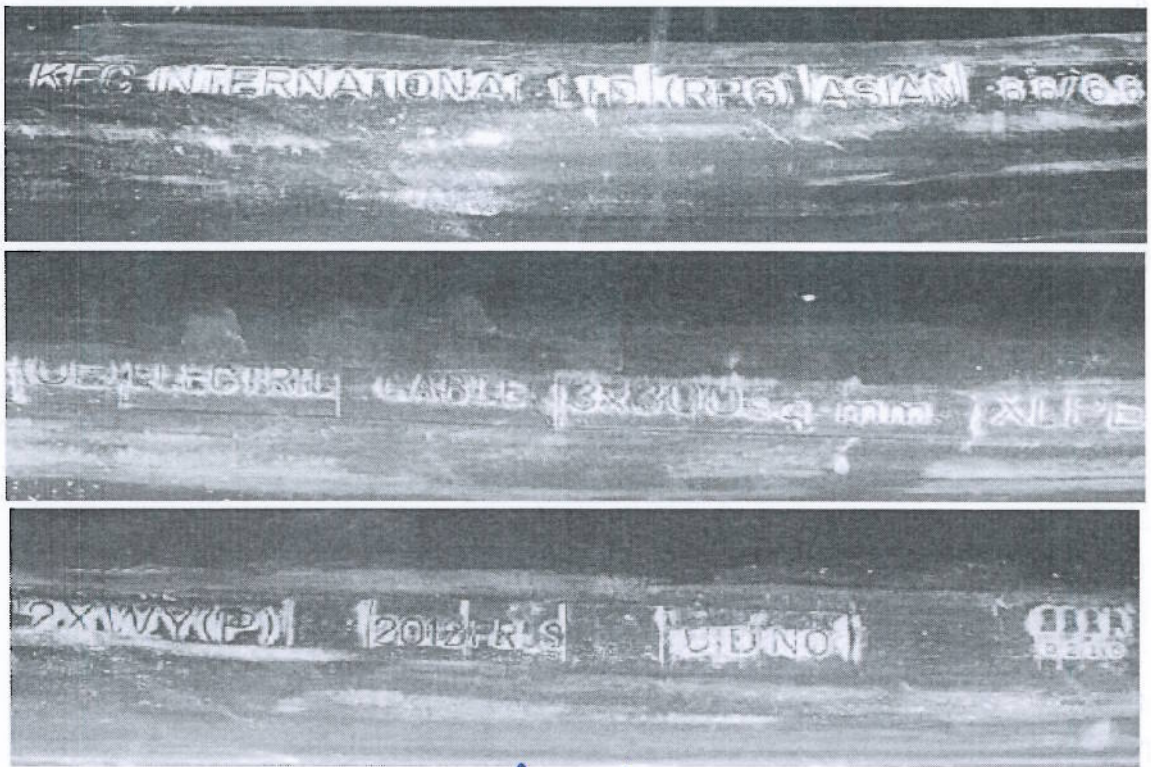
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DATE : 04.01.2013

SHEET: 1 OF 1

SAMPLE RECEIVED



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