

(BIS/NABL ACCREDITED LABORATORY)

19/168, Sarai Rohilla, Old Rohtak Road, Near Shastri Nagar Metro & Usha Mata Mandir, Delhi-110035, Tel. 011-23643995, Fax: 011-23643992 (M) 9582782444, Email: info@atncc.in; amittestcc@gmail.com

TEST REPORT

Test Certificate No.: ATCC2014060704 Issue To: Finecab Wires & Cables Pvt. Ltd.

> 2-3-465/7, Minister Road, Secunderabad-500003

Issue Date: 07.06.2014

Job Order No.: ATCC14051301

Test to be Conducted: IS 1554 Pt-1(1988)

Date of Test: 15.05.2014 to 04.06.2014

Date of Sample Received: 13.05.2014

Party Ref No.: Dated 12.05.2014

Quantity of Sample: 65 Meters (Approx.)

Sample Description: 19C x 2.5 sq.mm, (3/1.035)Annealed Bare Stranded Circular Copper Conductor, Class-2, PVC Insulated Type A, PVC Inner Sheath, Galvanized steel formed wire armoured, FR-LSH PVC Type ST1 sheathed cable, 1.1 kV Grade, Category C2, Cable code - YFY

EMBOSSING: FINECAB 1100 VOLTS AS PER IS: 1554 PART-1 ELECTRIC M.S.T.C.L. FRLS

SI.No.	Specification as per IS 1554:1988(Part-1) With Amendments No.1,2,3,4 & 5	Specified value	Test Results	Cross Referred To & Test Method of IS :10810-1984	Conformity
STAND CALIBRA	No. of cores	19	19	D CALIBRATION SOUTH AME TEST AND	yes
TO AND CALIBRATA TO AND CALIB	Core identification CI. 10.2 & 10.3.1 ENGRAPHICATION CONTROLOGICAL CONTROLOGICA CONT	For cables having more than 5 cores, as an alternate to the provisions of 10.1, the core identification may be done by numbers. In that case, the insulation of cores shall be of the same colour and numbered sequentially, starting with number 1 for the inner layer. The numbers shall be printed in Hindu-Arabic numerals on the outer surface of the cores. All the numbers shall be of the same colour which shall contrast with the colour of the insulation. The numerals shall be legible. The numbers shall be repeated at regular intervals along the core, consecutive numbers being inverted in relation to each other. When the number is a single numeral, a dash shall be placed underneath it. If the number consists of two numerals, these shall be disposed one below the other and a dash placed below the lower numeral. The spacing d between consecutive numbers shall not exceed 50 mm.	Grey with number (1 to 19)	DEAL BRATTON CENTRE AND TEST AND LABOR TON CENTRE AND TEST AND LAB	yes
3	Nature and shape of Conductor Cl. 8.1	Solid/Stranded Circular/ Compacted Circular/Shaped	Stranded Circular	Cl. 5.1, 5.2 & 5.3 of IS 8130:1984	yes

MANOHAR SINGH JADON

07/06/2014 (C.E.O.)

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SADHANA JADON
(Quality Manager)
Authorized Signatory 1 of 8



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4	Flexibility Cl. 8.1	Class-1/Class-2	Class-2	Cl. 4.1 (a) of IS 8130:1984	yes
5	No. of wire in Conductor	3 (Min.)	3	Cl. 5.2.3 & Table 2 of IS 8130:1984	yes
6	Dia. of wire ,mm	TESTAM METATON CENTROMET TESTAM CAMB TTESTAM CALBRATON CATRE ANT TESTAM CACBR TTESTAM CALBRATON CASTS AND TESTAM CAUBIN TTESTAM CALBRATON CASTS TO ANT TOTAM CAUBIN	1.035	Cl. 5.2.2 of IS 8130:1984	yes
7	Size of cable,sq.mm	2.50	2.52	TO CALIBRATION CENTRE AMILITES AND TO CALIBRATION CENTRE AMILITES AND	yes
7.1	Test on Conductor	wire diameter	THUMA BY THE ANY YEST A	TI CALIBRATION CENTRE AMIT DESTAND	CALIBRA
7.2	Annealing Test for copper, % (Before Stranding)	0.41 mm to 1.36 mm elongation 18% (Min.)	N.A.	Cl. 6.1.2.1 of IS 8130 :1984 (Pt- 1) 1984	yes
7.3	Tensile Strength (for Aluminium conductor) (Before stranding) Cl. 15.1 (a) (ii)	H2 Grade Above 100 and up to and including 150 N/mm ² or H4 Grade Above 150 N/mm ²	N.A.	Cl. 6.2.1 of IS 8130: 1984, (Pt- 2) 1984	CALIBRA CALIBRA CALIBRA CALIBRA CALIBRA CALIBRA CALIBRA CALIBRA
7.4	Wrapping Test (for Aluminium conductor) Cl. 15.1 (a) (iii)	The wire should not break	N.A.	Cl. 6.2.2 of IS 8130: 1984, (Pt- 3) 1984	CALIERA CALIERA CALIERA CALIERA CALIERA
7.5	Conductor resistance at 20°C Cl. 15.1 (a) (iv) Grey1 to Grey19	7.41 ohm/Km (Max.)	7.28 to 7.32	Cl. 6.3,6.3.1 & Table- 1,6 of IS - 8130:1984, (Pt- 5) 1984	yes
8	Test for Insulation & sheath	MITUTET AND CALIBRATION CON REALITY STAND CALIBRA	ATION CENTRE AMO TEST A	NO CALIDRATION CENTRE MAIT TEST AND	700
8.1	Thickness of Insulation Cl. 9.2 & 9.3,15.1(c) and	Nom. mm Min. mm	Nom. Min.	O COURTAINN CENTRE AMY TESTAND CALISTATION CENTRE AMY TESTAND O COURSATION CENTRE AMILITEST AND	CALIBRA CALIBRA
DICALIBRAT DICALIBRAT DICALIBRAT DICALIBRAT	Grey1 to Grey19	0.90 0.71	0.98 0.94 to to 1.02 0.96	(Pt- 6) 1984	yes
8.2	Application of Insulation CI. 9.4	It fits closely on the conductor and it shall be possible to remove it without damage to the conductor	Satisfactory	CALEATON CHIEF ANT TEST THE CALEATON SHITER ANT TEST AND	yes
8.3	Thickness of inner sheath Cl. 12.3 & 5.1(c) Table-4	0.3 mm (Min.)	0.60	(Pt- 6) 1984	yes
8.4	Application of inner sheath Cl. 12.1	The laid up cores shall be provided with inner sheath applied either by extrusion or by wrapping.	Extrusion	TO DEPOSITION SENTER AND TEST AND DEALES AND COLOROUS AND TEST AND DEALES AND COLOROUS AND TEST AND EALES AND COLOROUS AND TEST AND DEALES AND COLOROUS AND TEST AND DEALES AND COLOROUS AND TEST AND DEALES AND COLOROUS AND TEST AND	yes
	Cl.12.2	The inner sheath shall be so applied that it fits closely on the laid up cores and it shall be possible to remove it without damage to the insulation	Satisfactory	THE MAN THE MAY THE TANK I HALL BEATTER HOWEVER AND THE STAND I HALL BEATTER HOWEVER AND THE STAND I HALL BEATTER HOWEVER AND THE STAND I HALL BEATTER HOWEVER AND THE AND THE STAND I HALL BEATTER HOWEVER AND THE STAND I HALL BEATTER HOWEVER AND THE AND THE AND THE STAND I CALLES AND HOW THE MAY THE AND THE AND THE AND THE STAND I CALLES AND HOW THE MAY THE AND THE AND THE AND THE STAND I CALLES AND HOW THE MAY THE AND THE AND THE AND THE MAY THE AND	yes

MANOHAR SINGH JADON

07/06/2014 (C.E.O.)



SADHANA JADON

(Quality Manager)



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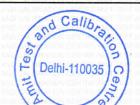
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8.5	Thickness of outer sheath Cl. 14.4 and Table 7	Min. 1.40 mm	1.65	(Pt- 6) 1984	yes
8.6	Application of outer sheath Cl. 14.1 (a,b,c) & 14.2	The outer sheath shall be applied by extrusion. It shall be applied. (i) Over the insulation in case of unarmoured single-core cables. (ii) Over the inner sheath in case of unarmoured twin, three-and multi-core cables; and	N.A. N.A.	LALIPRATION DENTITE ANTE LESCANDO DE CALIBRATION GENTRE ANTE LESCANDO DE CALIBRATION GENTRE ANTE LESCANDO DE LE CALIBRATION GENTRE ANTE LESCANDO DE LA LIBRATION GENTRE LESCANDO DE LA LIB	CALIBRA A CALIBRA A ALIBRA A ALIBRA A CALIBRA A
	THE CENTRE AND TEST AND CALLEGATION CENTRE AS AN OBJECT OF WHITE HAS AND CALLEGATION CENTRE AS AN CENTRE WHITE HAS AND CALLEGATION CENTRE AS AN CENTRE WHITE HEST AND CALLEGATION DESTRE AS AN CENTRE WHITE HAS AND CALLEGATION OF THE AS AND CALLEGATION OF THE AS AND CALLEGATION CENTRE AS CHARLES AND CALLEGATION CENTRE AS AND CALLEGATION CENTRE AND CALLEGATION CENTRE AS CONCESSED.	(iii) Over the armouring in case of armoured cables. The outer sheath shall be so applied that If fits closely over insulation, inner sheath/ armouring. It shall be possible to remove it without damage to the insulation/inner sheath	Satisfactory Satisfactory	(Pt- 6) 1984	Yes
8.7	Colour of outer sheath Cl. 14.3	The colour of outer sheath shall be black, unless any other colour is agreed to between the purchaser and the supplier.	Black	CAL BAATION CENTRE AMETEST AND CITALIS RATION CENTRE AMETERS AND CONTRACT AND CITALIS RATION CENTRE AND CITALIS RATION CENTRE AND CONTRACT AND CITALIS RATION CONTRACT AND CONTRACT AND CONTRACT AND CITALIS RATION CONTRACT AND CONT	yes
9	Tests for Armouring Cls. 15.1 (b)	MITTES AND CAUBHA ON GENTRE AMITTEST AND CAUBHA MITTEST AND CAUBRATION CENTRE AMITTEST AND CAUBRA MITTEST AND CAUBRATION CENTRE AMITTEST AND CAUBRA	ATION CENTRE AMETICAL AN ATION CENTRE AMETICAL AN ATION CENTRE AMETICAL AND TEST AND	CAUBACTON CENTREAMT THE AND STICAL BRATION CENTRE AND TEST AND CAUBACTON CENTRE AND TEST AND	MALIBEATI CALIBRATI
9.1	Application of armour Cl. 13.1.1	Over the insulation (Single Core) over the inner sheath (twin/three/multicore)	Satisfactory	NOALBRATION CENTRE AMILTES, AND CALBRATION CENTRE AMILTES AND CALBRATIC AMILTES AND CALBRATION CENTRE AMILTES AND CALBRATIC AMILTES AND CALBRATION CONTRE AMILTES AND CALBRATION CENTRE AMILTES AND CALBRATION CEN	yes
	CI. 13.1.2 TEST AND CALIBRATION GENTRE AND CALIBRATICAN GENT	The armour wires/formed wires shall be applied as closely as possible with a coverage of not less than 90 percent. The coverage of armour shall be done as per Appendix C	92.65	CLIAI BRATTÓN CENTRE AME TEST AND COLDHRATION CENTRE AME TEST AND CALBRATION CENTRE AME TEST AND CELBRATION CENTRE AME TEST	yes
9.2	Direction of armouring Cl. 13.1.3	The Direction of lay of the armouring shall be left-hand	Left Hand	O CACBRATION CENTRE AMIT TEST AND DICALISSA (ICH CENTRE AMIT TEST AND DICALISSA (CHICAMONIC AMIT TEST AND	yes
9.3	Type of Armouring Cl. 13.2	a) Galvanized steel round wire b) Galvanized steel formed wire	Galvanized Steel Formed wire	CAUSTATOR CENTRE AND TEST AND RESEARCH CENTRE AND TEST AND	yes
9.4	Dimension of Armouring, mm Cl. 15.1(b),13.3 & Table-5	A = 4.0 <u>+</u> 10% C = 0.80 <u>+</u> 10%	3.96 to 4.00 0.77 to 0.80	Cl. 7,Table-3 & 4 of IS :3975 :1999 (Pt- 36)/1984	yes yes

MANOHAR SINGH JADON

7/06/2019 (C.E.O.)



SADHANA JADON
(Quality Manager)
Authorized Signatory 3 of 8





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9.5	Mass of Zinc coating Cl.13.6 (f)	104.5 gm/m ² (Min.)	138.0	Cl. 9.1 & of IS :3975 :1999 (Pt- 41)/1984	yes
9.6	Uniformity of Zinc Coating Cl. 15.1(b), 13.6(e) & Table-6, Cl. 9.2 of IS:3975:1999, IS:10810 (Pt-40)	Red deposit of copper Yes /No	No Red Spots	Cl. 9.2 (b) of IS :3975 :1999(Pt-40)/1984	yes
9.7	Tensile strength, N/mm ² Cl. 13.6 (a)	250-580	380 to 432	Cl. 8.1 & Table-5 of IS :3975 :1999 (Pt- 37)/1984	yes
9.8	Elongation cl. 13.6 (b)	6% (Min.)	10	Cl. 8.1 & Table-5 of IS :3975 :1999 (Pt- 37)/1984	yes
9.9	Torsion Test (For Round Wire Only) Cl. 13.6 c	The wire should not show breaking splits of other defects For Min.19 No. of turns	N.A.	Cl. 8.2 & Table-6 of IS :3975 :1999 (Pt- 38)/1984	CALIBRA CALIBRA CALIBRA CALIBRA CALIBRA
AND CALIBRA AND CALIBRA AND CALIBRA AND CALIBRA AND CALIBRA AND CALIBRA	Winding Test (For Galvanized formed wire & Tapes only) Cl. 13.6 (d)	The Zinc coating shall show no cracks and particles of the coating shall not be detached by rubbing with bare finger	Satisfactory	Cl. 8.3 of IS :3975 :1999 (Pt- 39)/1984	yes
	Resistance Test Resistivity at 20°C.(For wires & Strips Only) Cl. 13.6 (g)	14.5 x 10 ⁻⁶ Ohm-cm (Max.)	14.06 x 10 ⁻⁶	Cl. 8.4 of IS :3975 :1999 (Pt- 42)/1984	yes
SPI ON COMMINATION OF THE PROPERTY OF THE PROP	Laying up of cores	in twin,three- and multi-core cables,the core shall be laid up together with a suitable lay; the outermost layer shall have right-hand lay and the successive layers shall be laid with opposite lay; where necessary, the interstices shall be filled with non-hygroscopic material	Satisfactory	AND LAW (SEASON CENTUR ME MAY TEST IN AND LAW (SEASON CENTUR MAY TEST IN AND LESS IN AND	yes
COLOR CODO DESIGNA	Plan for lay-up of cores 11.2 & Table 3	1-6-12	1-6-12	AMO COLLEGATION SERVICE AMOTESTAR AMO COLLEGATION SERVICE AMOTESTAR BRO COLLEGATION SERVICE AMOTESTAR	yes
	ELICATION FOR THE AMERICAN AND ADMINISTRATION OF THE PARTY OF THE PART	(Type-A)	RATION CENTRE AMILIES IV	MO CALIBRATION LIBRARE AMETERS AN	R CALIBR
11.1	Tensile strength Cl. 15.1d(1)	12.5 N/mm² (Min.)	RATION CENTRE AND TEST PROTECTIONS AND TEST RATION CENTRE AND TEST RATION CENTRE AND TEST RATION CENTRE AND TEST RATION CENTRE AND TEST	Cl. 4.1(iii)a & Table-1 of	DICALIBRI DICALIBRI HI CALIBRI DI CALIBRI DI CALIBRI DI CALIBRI DI CALIBRI
AND CALLERY	Grey1 to Grey19	antitestand calebrator centream decimal calif Antitestand calebrator centriant testaso calif	16.55 to 17.20	IS 5831-1984, (Pt- 7)1984	yes

MANOHAR SINGH JADON

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SADHANA JADON
(Quality Manager)

Issued By



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11.2	Elongation at break Cl. 15.1d(1)	150% (Min.)	GALISKATIČII CEVIBERANE I ESI CALISKATICINOS VIESKALI ESI LONGS KATON OS VIESKALI LIEV	Cl. 4.1(iii)b & Table-1	CALIB Calibration	
44.0	Grey1 to Grey19	(BET AND CHURRATION CEATRE MAIT FEAT AND FEST AND CALIBRATION OF A PREAMILE FOR AND	265 to 288	IS 5831-1984,	ye	
11.3	After Ageing in Air Oven Cl. 15.1d(2)	12.5 N/mm² (Min.)	CALIBRATOR COME WHE WAS TO FOALBRATOR COME WHE WAS TREE TO A I BLATOR OF KINE WAS TREE	Cl. 4.1(iv) & Table-1 of	A LANGE	
11.3.1	Tensile strength	12.5 N/IIIII (MIII.)	TOW BUYLLER OF THE THE THE THE	IS 5831-1984,	A A	
Main Calligez Main Calligez	Grey1 to Grey19		17.82 to 18.95	(Pt- 11) 1984	ye	
11.3.2	Variation	FEST AND CALLSRATION CENTRE AND FEST FRO FEST AND CALLSRATION TENTRE SIMILTERS AND	College Tiph CEVITC And TEXT	Cl. 4.1(iv) & Table-1 of	ye	
AND CALIBRO AND CALIBRA NACIONA IBRA	Grey1 to Grey19	± 20% (Max.)	-10.17 to -7.67	10 5021 1004	ye	
11.3.3	Elongation at break	450.0/ (M:)	GALLERATION CONTROL AND THE	HD CALIBRIA BIND LESS AND THE STATE	TOPUS	
AND DAURER AND DAURER	Grey1 to Grey19	150 % (Min.)	243 to 265	Cl. 4.1(iv) & Table-1 of		
11.3.4	Variation	. 20 0/ //4	And the Control of the	IS 5831-1984,	ye	
AND GALLERA	Grey1 to Grey19	± 20 % (Max.)	+7.99 to +8.30	(Pt- 11)1984	ye	
11.4	Shrinkage test					
	Cl. 15.1d(3)					
AND CALIBRA AND CALIBRA AND CALIBRA AND CALIBRA AND CALIBRA	Grey1 to Grey19	4 % (Max.)	1.0 to 1.50	Cl. 4.1(viii) & Table-1 of IS 5831-1984, (Pt- 12) 1984	ye	
11.5	Hot Deformation Test Cl. 15.1(d) (4) Grey1 to Grey19	50 % (Max.)	CALIFRATION CONTROL MAIN TEST CALIFRATION CONTROL MAIN TEST CALIFFRATION CONTROL MAIN TEST	Cl. 4.1(vi)& Table 1 of IS 5831:1984,	D CALIF	
11.6	Loss of Mass in air oven	ESTAND CAUSEWING CAN BE AM JUDGE AND	24.20 to 24.68	(Pt- 15) 1984	ye	
ND CALIBRA	Cl. 15.1 (d) (5) Grey1 to Grey19	2 mg/cm ² (Max.)	COLUMNITOR CENTRE AND TEST CALORATION CENTRE MILLIEUS CALORATION CENTRE AND TEST	Cl. 4.1(v)& Table 1 of IS 5831:1984,	D CALIE D CALIE D CALIE	
	Heat Shock test	EQUAND CATCHAILD CONTRACTOR OF ANY TO SELECT	0.426 to 0.562	(Pt- 10) 1984	yes	
OND CALIBRA MESAVIERA MESAVIERA MESAVIERA	Cl. 15.1(d) (6) Visual Examination Grey1 to Grey19	No signs of cracks or scales	O CAL IPATION CENTRE AMITTE ST LEAL HRATAIN EETITRE MITTERS DESIGNATION FURTHER MADERIA SCAL BRATAIN FURTHER MADERIA PERMITERS OF SENTING MADERIA PERMITERS OF SE	Cl. 4.1(vii)& Table 1 of IS 5831:1984,	D CALIE D SALIE D SALIE D SALIE D SALIE	
	Thermal Stability	ESTANDON PRODUCTION OF AMILYEST OF	no signs of	(Pt- 14) 1984	yes	
AND CALIBRA	Cl. 15.1(d) (7)	80 Minutes (Min.)	o cal brains sente and the Scal brains opered and the Cambration significant the OCAL brains charge amothe	Cl. 4.1(Xiii)& Table 1 of IS 5831:1984,		
	Grey1 to Grey19	FESTIANE CALIBRATION OF VIRE ABUT TESTIANO	>80	(Pt- 60) 1988	yes	
WD CAUGR	Physical tests for Outer sheath (*CI. 15.1(d)	Гуре ST1)	CAUBRATION CENTRE AUTO TEST CAUBRATION CENTRE AUTO TEST VALURADIUN CENTRE MAIO TEST	THE CALIBRATION CENTRE AND TEST AN AND CALIBRATION CONTRE AND TEST AN WELCOMBRANICH SENTRE VAIL TEST AN	D CALIF	
MD CALLS	Tensile strength Cl. 15.1(d) (1)	12.5 N/mm² (Min.)	14.22	Cl. 4.1(i)a & Table 2 of IS 5831:1984,(Pt-7) 1984	yes	
	Elongation at break Cl. 15.1(d) (1)	150% (Min.)	260	Cl. 4.1(i)b & Table 2 of IS 5831:1984 (Pt- 7) 1984	yes	

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SADHANA JADON (Quality Manager)

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12.2	After Ageing in Air Oven Cl. 15.1(d) (2)	TT TEST AND CAUDENCED CENTRE ANY TREP MAY THE STAND CAUSEAUGH, CRUTE AND THE AND THE	Aughter Concerns and the	THE RESERVE OF CHARLES AND THE PARTY AND THE	
12.2.1	Tensile strength	12.5 N/mm ² (Min.)	15.18	Cl. 4.1(ii) & Table 2 of	- 1 - 1 - 1
12.2.2	Variation	± 20% (Max.)	-6.75	IS 5831:1984,	yes
12.2.3	Elongation at break	150% (Min.)	243	(Pt- 11) 1984	yes
12.2.4	Variation	± 20% (Max.)	+6.54	(Pt-11) 1984	yes
12.4	Shrinkage test	= 20 % (Wax.)	+0.54	Cl 44(4) 0 T 11 0 6	yes
AND FALIBRA	Cl. 15.1d(3)	4% (Max.)	1.0	Cl. 4.1(vi) & Table 2 of IS 5831:1984, (Pt- 12) 1984	yes
12.5	Hot Deformation Test Cl. 15.1(d) (4)	50% (Max.)	24.6	Cl. 4.1(iv) & Table 2 of IS 5831:1984, (Pt-15) 1984	yes
12.6	Loss of Mass Cl.15.1 (d) (5)	2 mg/cm² (Max.)	0.568	Cl. 4.1(iii) & Table 2 of IS 5831:1984, (Pt- 10) 1984	yes
12.7	Heat Shock test Cl. 15.1(d) (6) Visual Examination	No signs of cracks or scales	No signs of cracks	Cl. 4.1(v) & Table 2 of IS 5831:1984, (Pt- 14) 1984	yes
12.8	Thermal Stability Cl. 15.1(d) (7)	40 Minutes (Min.)	>40	Cl. 4.1(xi) & Table 2 of IS 5831:1984, (Pt- 60) 1988	yes
12.9	Insulation Resistance Test: Cl. 15.1(e)	THE AND DEPENDENCE OF REAL TEST AND CONTRACTOR AND TEST AND CONTRACTOR AND TEST AND CONTRACTOR AND TEST AND CO	AUBRATION CENTRE AND TEXT AUBRATION CENTRE AND TEXT AUBRATION CENTRE AND TEXT	(FI- 00) 1988	D CALIFFE D CALIFFE
12.9.1	Volume Resistivity At 27°C	T TEST AND CALIBRATION CENTRE AND TEST AND CALIBRATION CENTRE AND LEST AND CALIBRATION FENTRE AND TEST AND CALIBRATION FENTRE AND TEST AND CALIBRATION FENTRE AND CALIBRATICAL FENTRE AND	ALERATION CENTRE AND USA ALERATION CENTRE AND USA ALERATION GENERALIZATION TENT	MRU CALIBRATION CENT (E ANT. TENT M DNS CALIBRATION CENT (E ANT. TENT M	D CALIBRA D CALIBRA D GALIBRA
ANULUGERN	Grey 1 Grey 5 Grey 9 Grey 14 Grey 19	1 x 10 ¹³ Ohm-cm (Min.)	5.93 x 10 ¹³ 6.19 x 10 ¹³ 7.33 x 10 ¹³ 8.14 x 10 ¹³ 7.28 x 10 ¹³	Cl. 4.1(i)a & Table-1 of IS 5831-1984, (Pt- 43)1984	yes yes yes yes
AND CALIBRAND CA	At Maximum rated temp. Grey 1 Grey 5 Grey 9 Grey 14 Grey 19	1 x 10 ¹⁰ Ohm-cm (Min.)	3.11 x 10 ¹¹ 2.95 x 10 ¹¹ 3.48 x 10 ¹¹ 2.08 x 10 ¹¹ 3.71 x 10 ¹¹	Cl. 4.1(i)b & Table-1 of IS 5831-1984, (Pt- 43)1984	yes yes yes yes yes

MANOHAR SINGH JADON

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mAIOTOCATOTA PLACE	Insulation Resistance constant Cl. 15.1(e)	DOT TEST MINISTER BEREFLOW, CONTROL NO. 1 AND SAME SAME WITTEN LAND COLUMNATION, CONTROL NO. 1 AND CONTROL WITTEN LAND COLUMNATION CONTROL NO. 1 AND CONTROL WITTEN LAND COLUMNATION CONTROL NO. 1 AND CONTROL	Michigan Carlos (1997) Anglogges regional from the Michigan Carlos (1997) Angloges regional critical	NECK HAR WELLEN THE AND TEST AND TO THE TOTAL BRIDGE TO THE T	CALIBRA CALIBRA CALIBRA
		NIT YEST AVELSALIBRATION SEN 'REAMITTEST KIS JAURE	ANONOEN HE HAT TUST	IN CALIFORNIA CHETTE ANT TOUT AND	CALIBRA
ABD CALISTAT ANTI CALISTAT BAJA CALISTAT ANTI CALISTAT ANTI CALISTAT ANTI CALISTAT ANTI CALISTAT	Grey 1 Grey 5 Grey 9 Grey 14 Grey 19	36.7 MΩkm (Min.)	217.9 227.7 268.5 299.3 267.4	Cls. 4.1 (ii) a & Table- 1 of IS 5831-1984, (Pt- 43) 1984	yes yes yes yes yes
12.9.3.2	At Maximum rated temp. Grey 1 Grey 5 Grey 9 Grey 14 Grey 19	0.037 MΩkm (Min.)	1.154 1.093 1.282 0.771 1.375	Cl. 4.1(ii)b & Table-1 of IS 5831-1984, (Pt- 43) 1984	yes yes yes yes
AND CALEBRAT	High Voltage test (Room Temp.) Cl. 15.1(g) & 16.2 Grey1 to Grey19	The core should withstand an a.c. voltage of 3 KV (rms) for five minutes without breakdown	withstood	(Pt- 45) 1984	yes
14	High Voltage test (water immer CI. 15.1(f) & 16.3	sion)	PTON CENERAMU DESIL AYON CENTRE AMITTES L AYON CENTRE AMITTEST ATION CENTRE AMITTEST	AND LARIES AND SENTIFE BUILTEEN AND BANKEY AND SENTIFE AND THE	CALIBRA CALIBRA CALIBRA CALIBRA
14.1	A.C test Cl. 16.3.1	The core shall be immersed in a water bath at 60±3°C after 24 hour a voltage of 3KV (rms) shall	CTOPH CEALURE JUNE TEST CTOPH TERTOR SAME TEST AT ZON CTOPHER SAME TEST AT ION COLOTINE JUST TEST AT ION COLOTINE JUST TEST	HOCOLURISCHORE POTRE ANT TUST AND LOCALURISCHOLURISCHER BURT TEST AND LOCALURISCHEN CHIEFE AND TEST AND HOCOLURISCHEN CHIEFE AND TUST AND LOCALURISCHEN CENTRE BURT (EST AND LOCALURISCHORICERT RE BUTT (EST AND LOCALURISCHORICERT RE BUTT (EST AND)	CALIBRA CALIBRA CALIBRA CALIBRA
AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN AND CALLSTAN	Grey1 to Grey19	be applied between conductor and water. This voltage shall be raised to 6KV (rms) within 10 sec and held constant at this values for 5 minutes	withstood	(Pt- 45) 1984	yes
14.2	D.C test	The core should withstand	ATTON CENTRE AND TEST	AND CAUBINATION CENTRE AND TEST AND AND CAUDINATION CENTRE AND TEST AND	ACALIBRA ACALIBRA
MND CALIBRAT AND CALIBRAT AND CALIBRAT AND CALIBRAT AND CALIBRAT AND CALIBRAT AND CALIBRAT	CI. 16.3.2 Grey1 to Grey19	dc.voltage of 1.2 kV in the same water bath as a.c. test at 60±3°C for 240 hours continuously without breakdown	withstood	(Pt- 45) 1984	yes
15	Flammability Test Cl. 16.4 & 15.1(h)	MIT FEST AND CALIBRATION CENTRE MIT TEST AND CALIBRATION CENTRE AMIL TEST AND CALIBRATION CENTRE AMIL TEST AND CALIBRATION OF YOR SALE TEST AND CALIBRATION OF YOR SALE TEST AND CALIBRATION OF YOR SALE TEST AND CALIBRATION	Afron Centric AMI Test Afron Centre AMI Test Afron Centre AMI Test	NNO GALISTATION CHUIMEANTE ESCANI MAI CALISPATION CHUIMEANT TESTANI MAI CALISPATION CHUIMEANT TOSTANI MAI CALISPATION CHUIMEANT TOSTANI	
15.1	Period of Buring after Removal of the Flame	60 sec. Max.	5	(Pt- 53) 1984	yes
15.2	Unaffected (uncharred) portion from the lower edge of the top clamp	50mm Min.	318	(Pt- 53) 1984	yes

MANOHAR SINGH JADON

Issued By

Calibration Delhi-110035

2 5ada 106/2014 SADHANA JADON (Quality Manager)
Authorized Signatory 7 of 8



(BIS/NABL ACCREDITED LABORATORY)

19/168, Sarai Rohilla, Old Rohtak Road, Near Shastri Nagar Metro & Usha Mata Mandir, Delhi-110035, Tel. 011-23643995, Fax: 011-23643992 (M) 9582782444, Email: info@atncc.in; amittestcc@gmail.com

TEST REPORT

Test Certificate No.: ATCC2014060704

SI.No.	Test Conducted, Specification as per IS 1554:1988(Part-1) With Amendments No 1,2,3,4 & 5	Specified value	Test Results	Cross Referred To & Test Method of IS :10810-1984	Conformity
16	Optional test	MIT TEST WILL SALERS TO LOCK OR MAY THE TWO CRITISE	Anon Deville and Text	III) Condendad (Bhose and Test And	Cal they
16.1	Cold Bend Test for Insulation CI.15.4(a) & CI. 4.1 (ix) Table- 1 of IS 5831-1984	No signs of cracks or scale	No signs of cracks	(Pt-20) 1984	yes
10.0	Grey1 to Grey19	HT TEXT MICCAL IDRATION CONTROL AND PERSON (ALLES	ADONO THE AVIT THE TO	AL COLIRAMINE DELIVER OWN TERT AND	CALIFICA
16.2	Cold Impact Test for Sheath CI.15.4(b) & 4.1 (Viii) Table-2 of IS: 5831-1984, Visual examination	No signs of cracks or scale	No signs of cracks	(Pt-21) 1984	yes
16.3	Armour Resistance Test Cl.15.4(c),Cl.13.5.1	NT TEST AND SHI BRATION SENTER MAIT TEST AND CALIBA ATT TEST AND CALLSKALONICS HE MAIT TEST AND CALIBA ATT CALMER AND CALLSRATION OF THE MAIL FEST AND CALIBA	N.A.	(Pt-5)	CAUTIES CAUTIES
17	Additional Test for Cables will Cl. 15.1.1 & Appendix A	ith Improved Fire Performance Ca	tegory(C2)	THE A DESCRIPTION OF THE PARTY THE STREET AND THE S	CALIBRA CALIBRA CALIBRA CALIBRA
17.1	Oxygen index Test, % Cl. 16.5	29 Min.	31.9	(Pt-58)/1998	yes
17.2	Temperature Index at 21% Oxygen, °C CI. 16.10	250	382.5	(Pt-64)/2003	yes
17.3	Test for halogen acid gas evolution by weight, % Cl. 16.9	The level of HCL evovled shall not exceed 20% by weight	15.71	(Pt-59)/1988	yes
17.4	Flame Retardance test on bunched cables Cl. 16.7	After burning has ceased, the cables should be wiped clean and charred or affected portion should not have reached a height exceeding 2.5 m above the bottom edge of the burner	1.58	(Pt-62)/1993	yes
17.5	Flame Retardance test on Single cables Cl. 16.6 (The external diameter of the test specimen shall not exceed 35 mm)	After the test, there should be no visible damages on the test specimen within 300 mm from its upper end	530	(Pt-61)/1988	yes
	Diameter of Cable, mm	35 (Max.)	26.65	D CAUSANTIN OFFICE AND TEST AND CAUSANTON CENTRA AND TEST AND	yes

MANOHAR SINGH JADON

07/06 2014 sued By (C.E.O.) Delhi-110035

SADHANA JADON
(Quinditized signatory 8 of 8

Notes:

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