

Laboratory **Conductor Testing Laboratory of Hindusthan Urban Infrastructure Ltd., Plot No. 1(c), Brahmaputra Industrial Park, Vill. Sila, Dist. Kamrup, Assam**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6473**

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Validity **03.11.2017 to 02.11.2019**

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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ELECTRICAL TESTING

I.	ELECTRICAL MATERIALS- CONDUCTORS			
1.	Aluminium Conductor AAC ACSR AAAC ACAR AACSR AL-59 HTLS Conductor Aluminium alloy rod, wire	Wire Diameter	IS 398 (Part 1):1996 (RA 2007),Cl.12.2 IS 398 (Part 2):1996 (RA 2007),Cl.13.2 IS 398 (Part 4):1994 (RA 2009),Cl 3.1.2 IS 398(Part 5):1992 (RA 2007),Cl.13.3 BS 215 (Part 1):1970,Cl.1.2 BS 215 (Part 2):1970,Cl.3.1	1.0 mm to 6.00 mm
		Wire & Conductor diameter	IEC 61089:1991,Cl.6.6.1.3 IEC 62004:2007,Cl.7.3.2 BS EN 50182:2001,Cl. 6.5.2 ASTM B 230:2007, Cl.14.1 ASTM B 399:2004, Cl.14 ASTM B 800:2005, Cl.9 SS 4240814:1989, Cl.4	1.00 mm to 65.00 mm
		Breaking Load	IS 398 (Part 1):1996 (RA 2007),Cl.12.3 IS 398 (Part 2):1996 (RA 2007),Cl.13.3.1 IS 398 (Part 4):1994 (RA 2009),Cl 12.2 IS 398(Part 5):1992 (RA 2007),Cl.13.5.2 IEC 61089:1991,Cl.6.6.4 IEC 62004:2007,Cl.7.3.3 BS 215 (Part 1):1970,Cl.4.3	0.5 kN to 20 kN

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			BS 215 (Part 2):1970, Cl.4.3.1 BS EN 50182:2001, Cl. 6.5.2 ASTM A 370: 2017 ASTM B 557:2006 SS 4240814:1989, Cl. 5	
		Lay Ratio	IS 398 (Part 1):1996 (RA 2007), Cl.12.6 IS 398 (Part 2):1996 (RA 2007), Cl.13.8 IS 398 (Part 4):1994 (RA 2009), Cl.3.1.4 IS 398 (Part 5):1992 (RA 2007), Cl.13.4 IEC 61089:1991(RA 1997), Cl.6.6.6 IEC 62004:2007 BS 215 (Part 1):1970, Cl.3.4.2 BS 215 (Part 2):1970, Cl. 3.4.2 BS EN 50182:2001 (RA 2001), Cl.5.5.5 ASTM B 232:2011 ASTM B 399:2004 (RA 2015) SS 4240814:1989, (RA1989)	3.00 to 30.00
		Elongation	IS 398 (Part 1):1996 (RA 2007) IS 398 (Part 2):1996 (RA 2007) IS 398 (Part 4):1994	0.1 % to 35 %

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			(RA 2009), Cl.12.3 IS 398(Part 5):1992, (RA 2007) IEC 61089:1991 (RA 1997) IEC 62004:2007 (RA2007), Cl. 7.3.4 BS 215 (Part 1):1970, Cl.4.3 BS 215 (Part 2):1970, Cl. 4.3.1 BS EN 50182:2001 ASTM A 370:2017 ASTM B 557M:2006 (RA 2015) SS 4240814:1989 SS 4240813:1981	
		Wrapping	IS 398 (Part 1):1996 (RA 2007), Cl.12.4 IS 398 (Part 2):1996 (RA 2007), Cl. 13.5.1 IS 398 (Part 4):1994 (RA 2009) IS 398(Part 5):1992, (RA 2007), Cl.13.7.1 IEC 61089:1991 (RA 1997) IEC 60889 IEC 62004:2007 (RA2007), Cl. 7.3.7 BS 215 (Part 1):1970, Cl.4.3 BS 215 (Part 2):1970, Cl. 4.3.1 BS EN 50182:2001, Cl.6.5.2 ASTM B 498:2008 (RA 2016)	Qualitative (1 D to 6 D)

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			SS 4240814:1989 SS 4240813:1981	
		DC Resistance (Resistivity)	IS 398 (Part 1):1996 (RA 2007),Cl.12.5 IS 398 (Part 2):1996 (RA 2007),Cl.13.6 IS 398 (Part 4):1994 (RA 2009),Cl.12.4 IS 398(Part 5):1992 (RA 2007) ,Cl.13.8 BS 215 (Part 1):1970,Cl.4.3 BS 215 (Part 2):1970, Cl. 4.3.1	1 mΩ to 10 Ω
			BS EN 50182:2001,Cl.6.5.2 IEC 61089:1991 (RA 1997) IEC 60889 IEC 62004:2007,Cl.7.3.5 ASTM B 193: 2002 (RA 2016) ASTM B 263:2004 (RA 2014) ASTM B 230:2007 (RA 2016) ASTM B 398:2002 (RA 2007) SS 4240814:1989 (RA1989),Cl.8	
2.	Galvanized Steel Core & Wire	Diameter	IS 398 (Part 2):1996 (RA 2007),Cl.13.2 IS 398(Part 5):1992 (RA 2007),Cl.13.3 IEC 61089:1991 (RA 1997),Cl.6.6.1.3 BS EN 50182:2001,	1.0 mm to 15.0 mm

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			Cl .6.5.2 BS 215 (Part 2):1970, Cl.3.1 IEC 61232:1993 (RA 1993),Cl.4.4 ASTM B 498:2008 (RA 2016), Cl.14.3	
		Breaking Load of wire	IS 398 (Part 2):1996 (RA 2007),Cl.13.3.1 IS 398(Part 5):1992 (RA 2007),Cl.13.5.2 IEC 61089:1991 (RA 1997),Cl.6.6.4 BS EN 50182:2001, Cl .6.5.2 BS 215 (Part 2):1970, Cl.4.3.2, IEC 61232:1993 (RA 1993),Cl.6.3 ASTM A557M:2006 (RA 2015) ASTM A 370:2017 ASTM B 498:2008 (RA 2016), Cl.8.1	2 kN to 20 kN
		Lay Ratio	IS 398 (Part 2):1996 (RA 2007),Cl.13.8 IS 398(Part 5) :1992 (RA 2007),Cl.13.4 IEC 61089:1991 (RA 1997), Cl.6.6.6 BS EN 50182:2001 (RA 2001),Cl.5.5.4 BS 215 (Part 2):1970, Cl.3.4.2 IEC 61232:1993(RA1993)	5.00 to 30.00

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		Torsion	IS 398 (Part 2):1996 (RA 2007), Cl.13.4.1 IS 398(Part 5):1992 (RA 2007), Cl.13.6.1 IEC 61089:1991(RA 1997) IEC 60888:1987 BS EN 50182:2001 (RA 2001), Cl.6.5.2 BS 215 (Part 2):1970, Cl.4.3.2 IEC 61232:1993 (RA 1993), Cl.6.3.3 ASTM B 498:2008 (RA 2016)	6 turns to 150 turns
		Elongation	IS 398 (Part 2):1996 (RA 2007), Cl.13.4.2 IS 398 (Part 5):1992 (RA 2007), Cl.13.6.2 IEC 61089:1991(RA1997) IEC 60888:1987 BS EN 50182:2001, Cl.6.5.2 BS 215 (Part 2)1970, Cl.4.3.2 IEC 61232:1993(RA 1993) Cl.6.3.2 ASTM B 557M:2006 (RA 2015) ASTM A 370:2017 ASTM B 498:2008 (RA 2016)	0.1 % to 8 %
		Wrapping	IS 398 (Part 2):1996 (RA 2007), Cl.13.5.2 IS 398 (Part 5):1992 (RA 2007), Cl.13.7.2	Qualitative (1 D to 6 D)

Mallika Gope
Convenor

N. Venkateswaran
Program Director

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			IEC 61089:1991(RA 1997) IEC 60888:1987 BS EN 50182:2001 (RA 2001), Cl. 6.5.2 BS 215 (Part-2):1970, Cl. 4.3.2 IEC 61232:1993(RA1993) ASTM B 498:2008	
		Mass of Zinc coating	IS 398 (Part 2):1996 (RA2007) Cl.13.7.2 IS 398 (Part 5):1992 (RA 2007), Cl.13.9.2 IS 2633:1996 (RA 2006) IS 4826:1979 (RA 2001) IEC 61089:1991(RA1997) IEC 60888:1987 BS EN 50182: (RA 2001), Cl. 6.5.2 BS 215 (Part 2):1970, Cl. 4.3.2 IEC 61232:1993 (RA 1993) ASTM A 90M:2013 ASTM B 263 :2014	50 g/m ² to 600 g/m ²
		Uniformity of Zinc Coating	IS 398 (Part 2):1996 (RA2007) Cl.13.7.2 IS 398 (Part 5):1992 (RA 2007), Cl.13.9.2 IS 2633-1996 (RA 2006) IS 4826-1979 (RA 2001) IEC 61089:1991(RA1997) IEC 60888:1987 BS EN 50182: (RA 2001), Cl. 6.5.2 BS 215 (Part 2):1970,	1 dips/minute to 6 dips/minute

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			Cl. 4.3.2 IEC 61232:1993 (RA 1993) ASTM A 90M:2013 ASTM B 263 :2014	
		Adhesion of Zinc Coating	IS 398 (Part 2):1996 (RA2007), Cl.13.7.2 IS 398 (Part 5):1992 (RA 2007), Cl 13.9.2 IS 4826:1979 (RA 2001) IEC 61089:1991 (RA1997) IEC 60888:1987 BS EN 50182: (RA 2001), Cl. 6.5.2 BS 215 (Part 2):1970, Cl. 4.3.2 IEC 61232:1993 (RA 1993) ASTM A 90M:2013 ASTM B 263 :2014	Qualitative (2 D to 5 D)