

**Laboratory**                      **Apar Industries Ltd., (Conductor Division Lab), Khata No.254/334, Plot No. 1383, 1387, 1393, 1390, 1385 Vill & PO-Raghunathpalli, Tehsil-Kalabira, Dist-Jharsuguda, Odisha**

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

**Certificate Number**        **TC-7987**

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**Validity**                         **10.10.2018 to 09.10.2020**

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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.	CONDUCTORS & CONDUCTING MATERIALS			
1.	<b>EC&amp; Alloy Conductors for Transmission &amp; Distribution of Lines</b>	Wire Diameter / Size	IS 398 (Part 1): 1996 (CI No. 12.2), IS 398 (Part 2): 1996 (CI No. 13.2), IS 398 (Part 4): 1994 (CI No. 3.1.2), IS 398 (Part 5): 1992 (CI No. 13.3), IEC 61089: 1991 (CI No. 6.6.1.3), EN 50182: 2001 (CI No. 6.5.2) ASTM B 232: 2011 (CI No.6), ASTM B-399: 2010 (CI No. 2), ASTM B- 524: 2011 (CI No. 4), ASTM B-711: 2005 (CI No. 5), AST M B 416 : 2007 (CI No. 12), SS 4240814: 1989 (CI No. 4), BS 215 (Part 1): 1970 (CI No. 4.3) & BS 215 (Part 2): 1970 (CI No. 4.3.1)	1.0 mm to 25 mm

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		Elongation	IS 398 (Part 2): 1996 (CI No. 13.4.2), IS 398 (Part 4): 1994 (CI No. 12.3), IS 398 (Part 5): 1992 (CI No. 13.6.2) , IEC 61089: 1991 (CI No. 1.1b), EN 50182: 2001 (CI No. 6.5.2), ASTM B 232: 2011 (CI No. 6), ASTM B-399: 2010 (CI No. 14), ASTM B- 524: 2011 (CI No. 13), ASTM B-711: 2005 (CI No. 14), SS 4240814: 1989 (CI No. 3),& BS 215 (Part 2): 1970 (CI No. 4.3.2)	0.5 % to 40 %
		Breaking Load / UTS	IS 398 (Part 1): 1996 (CI No. 12.3), IS 398 (Part 2): 1996 (CI No. 13.3), IS 398 (Part 4): 1994 (CI No.12.2), IS 398 (Part 5): 1992 (CI No. 13.5.2), IEC 61089: 1991 ( CI No. 6.6.4), EN 50182: 2001 (CI No. 6.5.2),	0.5 kN to 30 kN

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			ASTM B 232: 2011 (CI No 6), ASTM B-399: 2010 (CI No. 14), ASTM B- 524: 2011 (CI no. 13), ASTM B-711: 2005 (CI No. 14), SS 4240814: 1989 (CI No. 5), BS 215 (Part 1): 1970 (CI No. 4.3) & BS 215 (Part 2): 1970 (CI No.4.3.1)	
		Resistance and Resistivity	IS 398 (Part 1): 1996 (CI No. 13.5), IS 398 (Part 2): 1996 (CI No. 13.6), IS 398 (Part 4): 1994 (CI No.12.4), IS 398 (Part 5): 1992 (CI No. 13.8), IEC 61089:1991 (CI No.1.1a), EN 50182:2001(6.5.2), ASTM B-232: 2011 ( CI No.6), BS 215 (Part 1): 1970 (CI No. 4.3) & BS 215 (Part 2): 1970 (CI No.4.3.1)	0.01 mΩ to 100 mΩ

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		Lay Length	IS 398 (Part 1): 1996 (CI No. 3.4), IS 398 (Part 2): 1996 (CI No.3.4), IS 398 (Part 4): 1994 (CI No. 3.1.4), IS 398 (Part 5): 1992 ( VCI No. 13.4) IEC 61089: 1991 (CI No. 5.4), EN 50182: 2001 (CI No. 5.5), ASTM B 232: 2011 (CI No.8), ASTM B-399: 2010 (CI No7), ASTM B- 524: 2011 (CI No. 6), ASTM B-711: 2005 (CI No. 7), SS 4240814: 1989 (CI No. 4), BS 215 (Part 1): 1970 (CI No.3.4)& BS 215 (Part 2): 1970 (CI No.3.4)	10 mm to 500 mm
		Lay Ratio	IS 398 (Part 1): 1996 (CI No. 3.4), IS 398 (Part 2): 1996 (CI No.3.4), IS 398 (Part 4): 1994 (CI No. 3.1.4), IS 398 (Part 5): 1992 (CI No. 13.4)	9 to 30

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			IEC 61089: 1991 (CI No. 5.4), EN 50182: 2001 (CI No. 5.5), ASTM B 232: 2011 (CI No.8), ASTM B-399: 2010 (CI No7), ASTM B- 524: 2011 (CI no. 6), ASTM B-711: 2005 (CI No. 7), SS 4240814: 1989 (CI No. 4), BS 215 (Part 1): 1970 (CI No.3.4) & BS 215 (Part 2): 1970 (CI No.3.4)	
		Wrap Test	IS 398 (Part 1): 1996 (CI No.12.4), IS 398 (Part 2): 1996 (CI No.13.5) IS 398 (Part 5): 1992 (CI No.13.7), IEC 61089: 1991, EN 50182: 2001 (CI No.6.5.2) , ASTM B 232: 2011 (CI No.6), ASTM B-399: 2010 (CI No. 14), ASTM B- 524: 2011 (CI No. 13), ASTM B-711: 2005	1 D to 6 D

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			(CI No. 14), SS 4240814: 1989 (CI No. 3), BS 215 (Part 1): 1970 (CI No.4.3) & BS 215 (Part 2): 1970 (CI No. 4.3.1)	
		Torsion Test	IS 398 (Part 2): 1996 (13.4.1), IS 398 (Part 5): 1992 (CI No.13.6.1), IEC 61089: 1991, EN 50182: 2001 (CI No.6.5.2), & BS 215 (Part 2): 1970 (CI No. 4.3.2)	1 rev/ minute to 60 rev/ minute, 1 twist to 50 twist
		Uniformity of Coating Test ( On Galvanized Steel Wire – Dip Test / preece test )	IS-2633:1986 (CI No. 4.0), EN 50182: 2001 (CI No. 6.5.2), & BS 215 (Part 2): 1970 (CI No.4.3.2)	0.5 Dips to 5 Dips
		Mass of Zinc Coating On HTGS Wire	IS -6745:1972 (CI No. 5), IEC 888:1987 (CI No 11.2 appendix A & 11.3 appendix B) , EN 50182:2001 (CI No.6.5.2) ASTM B 232: 2011 (CI No.6), ASTM B-711: 2005	10 g/m <sup>2</sup> to 450 g/m <sup>2</sup>

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			(CI No. 5.2), & BS 215 (Part 2): 1970 (CI No. 4.3.2)	

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Convenor

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