

**Laboratory** NTPC Energy Technology Research Alliance (NETRA), NTPC Ltd.,  
Plot No. E-3, Ecotech-II, Greater Noida, Gautam Budh Nagar,  
Uttar Pradesh

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

**Discipline** Mechanical Testing **Issue Date** 09.12.2016

**Certificate Number** T-0301 **Valid Until** 08.12.2018

**Last Amended on** - **Page** 1 of 1

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>I. MECHANICAL PROPERTIES OF METALS</b>				
1.	<b>Ferrous and Non-Ferrous Metals and Alloys</b>	Accelerated stress rupture test	ASTM E 139-06	Temperature: 600 °C to 800 °C  Load on Pan: 250 g to 10 kg  Stress Rupture Time (test result): 1000 h to 10,000 h
<b>II. METALLOGRAPHY TEST</b>				
1.	<b>Ferrous and Non-Ferrous Metals and Alloys</b>	Macro etch test	ASTM E 340-13	Qualitative
		Micro structural characterisation	ASM Hand Book, Vol. 9, (9 <sup>th</sup> Edition): (1985)	Qualitative
		Micro hardness test	ASTM E 384-16	100 HV to 700 HV 0.5
<b>III. PLASTICS AND POLYMERS</b>				
1.	<b>Strong &amp; weak acid cation and strong &amp; weak base anion exchange resins</b>	Density	IS 7330: 1988 (Page. 8) (RA 2004)	0.4 g/ml to 0.9 g/ml
		Particle size distribution	IS 7330: 1988 (Page 7) (RA 2004)	250 µ to 1.2 mm
<b>IV. ACTIVATED CARBON</b>				
1.	<b>Activated Carbon (granular)</b>	Particle size distribution	IS 877: 1989 (Page. 2): (1999) (Edition 3.1)	63 µ to 1.2 mm

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