Laboratory	**Unbrako Testing & Calibration Laboratory (Deepak Fasteners Limited), VPO: Jaspalon, GT Road, Doraha, Ludhiana, Punjab**	
Accreditation Standard	**ISO/IEC 17025: 2005**	
Certificate Number	**TC-7391**	**Page 1 of 1**
Validity	**09.06.2018 to 08.06.2020**	**Last Amended on --**

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

MECHANICAL TESTING

I.	**MECHANICAL PROPERTIES OF METALS**			
		Ultimate Tensile Strength		100 MPa to 1500 MPa
		Yield Strength		100 MPa to 1400 MPa
		0.2% Proof Stress		100 MPa to 1400 MPa
		Elongation		4 % to 35 %
		Reduction Area		4 % to 80 %
		Tensile Strength (Wedge Load Test)	ISO 898-1: 2013 IS 1367-3: 2002	10 kN to 600 kN
		Rockwell Hardness	ISO 6508-1: 2016 IS 1586-1: 2012	20 HRBW to 100 HRBW 20 HRC to 70 HRC
		Micro Hardness	ISO 6507-1: 2018 IS 1501-1: 2012	50 $HV_{1.0}$ to 800 $HV_{1.0}$ 50 $HV_{0.5}$ to 800 $HV_{0.5}$ 50 $HV_{0.3}$ to 600 $HV_{0.3}$ 50 $HV_{0.2}$ to 600 $HV_{0.2}$ 50 $HV_{0.1}$ to 450 $HV_{0.1}$
		Shear Stress	IS 12427: 2001	50 MPa to 800 MPa
		Charpy V notch Impact Strength	ISO 148-1: 2016	2 J to 240 J (Ambient to (-)20 °C)
		Proof Load (Bolt & Screw)	ISO 898-1: 2013 IS 1367 (Part 3): 2002	10 kN to 600 kN
		Proof Load (Nut)	ISO 898-2: 2012 IS 1367 (Part 6): 1994	10 kN to 600 kN

Nikhil Kumar
Convenor

N. Venkateswaran
Program Manager