Laboratory LPG Equipment Research Centre, Dooravaninagar, Bangalore,

Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Discipline Mechanical Testing Issue Date 24.05.2014

Certificate Number T-2189 Valid Until 23.05.2016

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. PE	RFORMANCE TEST	Γ		
1.	LPG Cylinder (IS 3196 (Part-1): 2003)	Tensile Strength	IS 1608: 2005, (RA 2010)	$0.1 \text{ to } 100 \text{ kN/mm}^2$
		Yield Stress / Proof stress (0.2%)	IS 1608: 2005, (RA 2010)	$0.1 \text{ to } 100 \text{ kN/mm}^2$
		% Elongation	IS 1608: 2005, (RA 2010)	1% to 90 %
		Weld Tensile Strength	IS 3196 (Part 3): 2012	$0.1 \text{ to } 100 \text{ kN/mm}^2$
		Root & Face Bend tests	IS 3196 (Part 3): 2012	6 mm & 9 mm
		Hydrostatic Tests	IS 3196 (Part 3): 2012	0.01 kg/cm ² to 200 kg/cm ²
		Pneumatic leak Tests	IS 3196 (Part 3): 2012	0.5 kg/cm ² to 25 kg/cm ²
		Burst Tests	IS 3196 (Part 3): 2012	0.01 kg/cm ² to 200 kg/cm ²
		Water capacity	IS 3196 (Part 1): 2013	0.01 kg to 300 kg
		Volumetric Expansion	IS 3196 (Part 1): 2013	1% to 90%
		Minimum Thickness	IS 3196 (Part 3): 2012	0.01 mm to 25 mm
		Verticality	IS 3196 (Part 1): 2013	Qualitative
		Foot ring sheet thickness	IS 3196 (Part 1): 2013	0.01 mm to 50 mm

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	LPG Cylinder (IS 3196 (Part-1): 2003)	Paint Thickness (By coating thickness gauge using FN Probe)	IS 3196 (Part 1): 2013	1 μ to 200 μ
		Ground Clearance	IS 3196 (Part 1): 2013	0.01 mm to 300 mm
2.	Pressure Regulators (IS 9798: 2013)	Soundness Tests	IS 9798:2013	Qualitative
		Performance Tests	IS 9798:2013	Qualitative
		Paint Adhesion	IS 9798:2013	Qualitative
3.	Valve (IS 8737: 1995)	Valve Inlet Thread	IS 8737:1995, (RA 2010)	
		LI		0.01 mm to 50 mm
		L8		0.01 mm to 50 mm
		Truncation		0.01 mm to 50 mm
		Valve Dimension Acceptance Test	IS 8737:1995, (RA 2010)	Qualitative
		Pneumatic Tests	IS 8737:1995, (RA 2010)	Qualitative
4.	Domestic LPG Stoves	Thermal efficiency for LPG stoves- Small burner	IS 4246: 2002, (RA 2013) LERC defined Procedure C-101 (Issue dt.21.02.2014)	60% to 90% 60% to 97%

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Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Domestic LPG Stoves	Thermal efficiency for LPG Stoves- Big burner	IS 4246: 2002, (RA 2013) LERC defined Procedure C-101 (Issue dt.21.02.2014)	60% to 90% 60% to 97%
Rubber Hose for	Bore Size Measurement	IS 9573:2012	0.01 mm to 20 mm
LPG	Hydraulic Tests (Proof)	IS 443:1995, (RA 2012)	1 mm to 300 mm
	Hydraulic Tests (Burst)	IS 443:1995, (RA 2012)	0.01 kg/cm ² to 200 kg/cm ²
	Grip Strength	IS 9573:2012	Qualitative
	Burning Behaviour	IS 9573:2012	Qualitative
	Resistance to Low temperature (-40°C)	IS 9573:2012	Qualitative
	Flexibility of hose	IS 9573:2012	Qualitative
	Adhesion	IS 3400(Part 5):1986, (RA 2008)	0.1 N/mm to 5000 N/mm
	Tensile Load	IS 3400(Part 1):2012/ IS 443:1975, (RA 2012)	0.1 N to 5000 N
	% Elongation	IS 3400(Part 1):2012/ IS 443:1975, (RA 2012)	10 to 1200
	Cover Thickness	IS 9573:2012	0.01 mm to 20 mm
	Lining Thickness	IS 9573:2012	0.01 mm to 20 mm
	Material of Test Domestic LPG Stoves	Domestic LPG Stoves Thermal efficiency for LPG Stoves- Big burner Bore Size Measurement Hydraulic Tests (Proof) Hydraulic Tests (Burst) Grip Strength Burning Behaviour Resistance to Low temperature (-40°C) Flexibility of hose Adhesion Tensile Load % Elongation Cover Thickness	Domestic LPG Thermal efficiency for LPG IS 4246: 2002, (RA 2013) LERC defined Procedure C-101 (Issue dt.21.02.2014) Rubber Hose for LPG Hydraulic Tests (Proof) IS 443:1995, (RA 2012) Hydraulic Tests (Burst) IS 443:1995, (RA 2012) Grip Strength IS 9573:2012 Burning Behaviour IS 9573:2012 Resistance to Low temperature (-40°C) Flexibility of hose IS 9573:2012 Adhesion IS 3400(Part 5):1986, (RA 2008) Tensile Load IS 3400(Part 1):2012/ IS 443:1975, (RA 2012) % Elongation IS 3400(Part 1):2012/ IS 443:1975, (RA 2012) Cover Thickness IS 9573:2012