

	<b>ACCREDITATION DOCUMENT</b>	<b>F-06/02 Issue Date: 18/08/2020 Rev. No: 09 LAB 035</b>
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## **Accreditation No: LAB 035**

### **Awarded to**

**Pakistan Institute of Technology for Minerals and Advanced Engineering Materials (PITMAEM), Pakistan Council of Scientific & Industrial Research (PCSIR) Labs. Complex. Lahore 54600, Pakistan.**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **24-08-2006** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017**.

The accreditation requires regular surveillance, and is valid until **16-06-2025**.

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

**PAKISTAN NATIONAL ACCREDITATION COUNCIL**

13-12-2022  
Date

SD  
Director General

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### Testing Laboratory.

**Accreditation scope of Pakistan Institute of Technology for Minerals and Advanced  
Engineering Materials (PITMAEM), Pakistan Council of Scientific & Industrial Research  
(PCSIR) Laboratories Complex, Lahore 54600, Pakistan.**

**Permanent laboratory premises**

Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
<b>1. Metallography Laboratory.</b>			
Metallic materials	Material Characterization	Test Method for Preparation of Metallographic Specimens	ASTM E 3:2017
		Test Method for Micro-etching Metals and Alloys	ASTM E 407:2015
			SASO ISO 22991:2019
			SASO GSO ISO 17639
		Test Method for Macro-etching Metals and Alloys	ASTM E 340:2015
			SASO ISO 22991:2019
			SASO GSO ISO 17639
Test Method for Determining Average Grain Size	ASTM E 112:2021		
	SASO ISO 22991:2019		
	SASO ISO 643		
Test Method for Measurement of Metal and Oxide Coating Thickness by Microscopical Examination of a Cross Section.	ASTM B 487:2020		

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 Director



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Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
		Test Method for Evaluating the Microstructure of Graphite	ASTM A 247:2019

**2. Optical Emission Spectrometer Laboratory**

Metallic Materials	Material Characterization	Optical Emission Vacuum Spectrometric Analysis of Carbon and Low Alloy Steel	ASTM E 415-21 SASO ISO 22991:2019 SASO/ISO 4978
		Optical Emission Vacuum Spectrometric Analysis of Stainless Steel by Point to Plane Excitation Technique	ASTM E 1086:2022
		Analysis of Manganese Steel using Atomic Emission Spectrometry	ASTM E 2209:2022
		Analysis of Cast Iron using Optical Emission Spectrometry	ASTM E 1999:2018
		Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Argon Atmosphere Point to Plane, Unipolar Self-Initiating Capacitor Discharge	ASTM E 1251:17a
		Practice for Sampling Steel and Iron for Determination of Chemical Composition	ASTM E 1806:2018
	Chemical Testing	Standard Test Methods for Chemical Analysis of Tool Steels and Other Similar Medium- and High-Alloy Steels and standard guide for metal identification and grade verification	<b>ASTM E352:2018</b> <b>ASTM E1476-04:2014</b>

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Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
	Chemical Testing	Determination of Carbon in Steel and Iron by combustion and Inert Gas fusion technique	<b>ASTM E1019:2018</b>
<b>3. Mechanical Laboratory</b>			
Metallic Materials	Mechanical Testing	Test Method for Tension testing of deformed steel bars	ASTM A 370:2021
		Test Method for Rockwell hardness of Metallic Materials	ASTM E 18:2022
		Notched Bar (Charpy) Impact Testing of Metallic Materials	<b>ASTM E-23:2018</b>
Ceramic Materials	Mechanical Testing	Determination of Modulus of Rupture of Marble	<b>ASTM C-99:2018</b>
<b>4. Cylinder Testing Laboratory</b>			
Liquid Petroleum Gas (LPG) Composite Cylinder	Mechanical Testing	Pressure Cyclic Test	EVS –EN 14427:2014
		Burst Test	
		Torque Test	
		Leak Test	ISO 11119-3: 2020(E)
		Pressure Proof Test	
		Drop Test	
		Flawed Cylinder Test	
		Exposure to Elevated Temperature at Test Pressure	EVS-EN 14427:2014

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Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
LPG Metallic Cylinders	Mechanical Testing	Burst Test Under Hydraulic Pressure	SASO-GSO-ISO 22991 :2019
		Pressure Test	
		Pressure Cycling Test	

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