



ATEL-0123-005G

## SCOPE OF ACCREDITATION

### METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER

MIRDC Compound, Gen. Santos Ave., Bicutan, Taguig City

#### Mechanical Testing

Classification of Scopes	Specific tests or Measurements	Standard Method / Reference Standard
<b>Metals and Metal Products</b>		
Tension Tests on Test Pieces	Tension Test	ASTM E8/E8M
		ASTM A370
		ASTM B557
		JIS Z 2241
		ISO 6892
Tension Tests on Products	Tension Test	ASTM E8/E8M ASTM A370 ASTM B557 ISO 6892 JIS Z 2241
Hardness tests Metallic materials/ products	Brinell Hardness Test	ASTM E10
	Rockwell Hardness Test	ASTM E18
	Microhardness	ASTM E384
	Vickers Hardness	ASTM E92
Bend Test - Metallic materials	Bend Test	ASTM A370; ISO 7438
Tests on reinforcement for Concrete	Tension Test	ASTM A370
	Bend Test	PNS 49
	Deformation Measurement	PNS 211
	Variation in Mass	PNS 49; PNS 211
Tests on Wire	Tension Test	ASTM A370; ASTM E8/E8M; ISO 6892 PNS 113; PNS136
	Bend Test Dimension Test Torsion Test Winding Test Physical Appearance Test	PNS 113; PNS136
Tests on Tubes	Tension Test	ASTM E8/E8M; ASTM A370; ISO 6892 JIS Z2241
	Flattening Test	PNS 26
	Hydrostatic Test	PNS 26

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Qualification of Weld Joints	Tension Test	ANSI/AWS D1.1 ASME IX ABS RULE Requirements for materials and welding Part 2
	Bend Test	
	Fracture / Break Test	
	Macroexamination	
Structural Shapes (Angle bars)	Tension Test	ASTM A370; ASTM E8/E8M; PNS 657; ISO 630
	Variation in Mass Test	
	Dimensional Measurements	PNS 657
	Camber Test	
Internally and Externally Threaded Fasteners	Out of Square Test	ASTM F606/F606M
	Axial Tension Test Shear Test	
Cylinders and Other Pressure Vessels	Tension test	ASTM A370; ASTM E8/E8M; ASTM F606/F606M
	Hydrostatic Test	
	Burst Test	
	Tension Test	
	Bend Test	
	Air Leak test	
Macroexamination	PNS 03; PNS 04	
<b>Non-Destructive Test by Radiography</b>		
Radiographic examination of metals		
Aluminum Alloys - Welded joints - Castings - Riveted Joints - Other Specified Products	Radiographic Test	ASTM E94; ASTM E155; ASTM E186; ASTM E272; ASTM E280
Copper Alloys - Welded joints	Radiographic Test	ASTM E301; ASTM E390; ASTM E446; ASTM E505

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Classification of Scopes	Specific tests or Measurements	Standard Method / Reference Standard
- Castings - Other Specified Products		
Ferrous Materials - Welded joints - Castings - Other Specified Products (including Stainless Steel)	Radiographic Test	ASTM E186; ASTM E 689; ASTM E1030; ASTM E1032; ASTM E802
<b>Non-Destructive Test by Ultrasonic</b>		
Ultrasonic examination of metals		
Aluminum alloys - Wrought Products - Welded joints - Castings - Other Specified Products	Ultrasonic Test	ASTM E1114; ASTM E164; ASTM E213; ASTM E273; ASTM E587; ASTM E588 ASTM E797; ASTM E1315
Ferrous Metals - Rolled products - Forging - Welded Joints - Castings	Ultrasonic Test	ASME V Art 4; ANSI/ AWSD1.1 Sec 6 Part C; ASTM E 186
Other specified products (including Stainless Steel)		
Ultrasonic examination of components & assemblies	Ultrasonic Test	ASME I; ASME VIII
Aircraft structure		
Bonded assemblies		
Components & assemblies		
Thickness measurement		
<b>Non-Destructive Test by Surface Methods</b>		
Penetrant testing (including visible dye and fluorescent dye techniques) - Water washable methods - Solvent removable methods - Post emulsifiable method	Penetrant Test	ASTM E165; ASTM E1208
Magnetic particle testing	Magnetic Particle Test	



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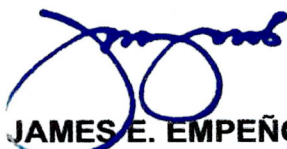
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#### Mechanical Testing

Classification of Scopes	Specific tests or Measurements	Standard Method / Reference Standard
(including visible dye and fluorescent dye techniques)		ASTM E1210; ASTM E1219;
Magnetic flow method - Welded joints - Forging - Casting - Other machine products		ASTM E1220; ASTM E1117; ASTM E1418; ASTM V Art 6 ANSI/AWS D1.1 Sec. 6 Part A;
Current flow method (DC) - Welded joints - Forging - Casting - Other machine products		ASTM E125; ASTM E709; ASTM E1444; ASME V Art 7
Coil method - Welded joints - Forging - Casting - Other machine products		

Legend to Reference Standards:

ASTM - American Society for Testing and Materials  
 ASME - American Society of Mechanical Engineers  
 ISO - International Organization for Standardization  
 JIS - Japanese Industrial Standard  
 PNS - Philippine National Standard



**JAMES E. EMPEÑO**  
 Director IV  
 Philippine Accreditation Bureau



**PAB ACCREDITED  
 TESTING LABORATORY  
 PNS ISO/IEC 17025:2017  
 LA-1996-005G**