



Certificate No. : L2590-190506

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

WHOLE POWER CO., LTD.

Materials Testing Laboratory

No.47-2, Fanpolin, Xiban Li, Sanchie District, New Taipei City, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017;CNS 17025:2018
Accreditation Number : 2590
Originally Accredited : October 01, 2012
Effective Period : October 01, 2018 to September 30, 2021
Accredited Scope : Testing Field, see described in the Appendix

Chung-Lin Wang

Chung-Lin Wang
President, Taiwan Accreditation Foundation
Date: May 06, 2019



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Accreditation Number : 2590

Laboratory Head : HUANG, Yi-Heng

■ 01. 01 Metals and Alloys Products

Low Alloy Steel

C001 Elemental Analysis

CNS 10006

ASTM E415

C: (0.03 to 1.20) %

Si: (0.08 to 1.70) %

Mn: (0.195 to 1.677) %

P: (0.01 to 0.074) %

S: (0.0078 to 0.073) %

Cr: (0.111 to 3.03) %

Mo: (0.025 to 0.98) %

V: (0.01 to 0.496) %

Cu: (0.022 to 0.694) %

Ni: (0.019 to 3.50) %

Approval Signatory: LEE, Wen-Jung; HUANG, Yi-Heng; LU, Chin-Kun; HSIAO, Kuo-Cheng

■ 01. 01 Metals and Alloys Products

Austenitic Stainless Steels

C001 Elemental Analysis

CNS 10006

ASTM E1086

C: (0.022 to 0.152) %

Si: (0.17 to 1.14) %

Mn: (0.40 to 1.70) %

P: (0.008 to 0.037) %

S: (0.008 to 0.026) %

Ni: (5.66 to 14.74) %

Cr: (12.35 to 19.06) %

Mo: (1.59 to 3.55) %

Approval Signatory: LEE, Wen-Jung; LU, Chin-Kun; HSIAO, Kuo-Cheng

■ 01. 01 Metals and Alloys Products

Metals and Metal Products

M002 Tension

CNS 2111

(9.8 to 441) kN

(1 to 45) tf

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M101 Rockwell Hardness
CNS 2114
(20 to 65) HRC
(40 to 100) HRB

Approval Signatory: LEE, Wen-Jung; LU, Chin-Kun; HSIAO, Kuo-Cheng

01. 01 Metals and Alloys Products
Torsion Bar
M006 Fatigue
MIL-S-45387B Sec. 4.4.11.3
Diameter $\leq$ 80 mm
Length: (500 to 2400) mm

Approval Signatory: LEE, Wen-Jung; LU, Chin-Kun; HSIAO, Kuo-Cheng

01. 01 Metals and Alloys Products
Mechanical Hardware Metals and Products
M012 Salt Spray
CNS 8886
Neutral Salt Spray

Approval Signatory: LEE, Wen-Jung; LU, Chin-Kun; HSIAO, Kuo-Cheng

01. 01 Metals and Alloys Products
Part of Assembly
M017 Dimension
In-house Method (Document No.: WLWI-125)
X Axis: (0 to 1200) mm
Y Axis: (0 to 2000) mm
Z Axis: (0 to 900) mm

Approval Signatory: LEE, Wen-Jung; LU, Chin-Kun; HSIAO, Kuo-Cheng

01. 02 Metals and Alloys Products
Al-Si Alloy
C001 Elemental Analysis
ASTM E1251
Si: (6.20 to 8.00) %
Fe: (0.07 to 0.85) %
Cu: (0.039 to 0.21) %
Mn: (0.022 to 0.41) %
Mg: (0.10 to 0.66) %
Zn: (0.03 to 0.34) %
Ti: (0.05 to 0.17) %

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06. 02 Polymer and Composite Materials

Rubber and Related Products

C159 Material Identification

In House Test Method (Document No. WLWI-117, Based on ASTM D3677)

EPDM Rubber, Oil Resistance Rubber Related (Acrylic Rubber (ACM), Chloroprene

Polythylene (CSM), Acrylonitrile-Butadiene Rubber (NBR), Chloroprene Rubber (CR))

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M001 Hardness

CNS 3555

Durometer Type A: 20 to 90

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M002 Tension

CNS 3553

CNS 687

(49 to 490) N

(5 to 50) kgf

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M005 Bending with Heat Resistance

CNS 3551 (1987) Sec. 2.10

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M020 Deformation under Loading and Heat

Standard Material Requirements for TPC C001

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M021 Ageing Test

CNS 3556

CNS 687

(50 to 200) °C

Change in Hardness, Elongation Change, Tensile Strength Changes, Tensile Stress Change

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M033 Immersion

CNS 3562 Sec. 4

Test Lubricants No.1 Oil and No.3 Oil



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Visual Inspection, Volume Change, Change in Hardness, Elongation Change, Tensile Strength Changes

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M035 Ozone
CNS 10018
CNS 687
(25 to 600) pphm
(0.25 to 250) ppm
(15 to 50) °C

Approval Signatory: LEE, Wen-Jung; HSIAO, Kuo-Cheng

M038 Compression Set
CNS 3560

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(Null below)