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

Certification Accreditation

(Certificate No：L2590-211230)

This is to certify that

WHOLE POWER CO., LTD.

Materials Testing Laboratory

No.47-8, 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	：	January 31, 2022 to September 30, 2024
Accredited Scope	：	Testing Field, see described in the Appendix

Scan to verify

Ching-Chang Lien

Ching-Chang Lien
President, Taiwan Accreditation Foundation
December 30, 2021

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

Accreditation Number ：2590

Laboratory Head ：LEE, Wen-Jung

□ 01. 01 Metals and Alloys Products
Low Alloy Steel
C001 Elemental Analysis
Refer to CNS 10006, ASTM E415 in house method docunment No: WLWI-128
C: (0.03 to 1.20) %
Si: (0.08 to 1.70) %
Mn: (0.195 to 1.60) %
P: (0.01 to 0.074) %
S: (0.0078 to 0.058) %
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; LU, Chin-Kun; HSIAO, Kuo-Cheng

□ 01. 01 Metals and Alloys Products
Austenitic Stainless Steels
C001 Elemental Analysis
Refer to CNS 10006, ASTM E1086 in house docunment No: WLWI-128
C: (0.022 to 0.152) %
Si: (0.44 to 1.14) %
Mn: (0.494 to 1.70) %
P: (0.008 to 0.037) %
S: (0.008 to 0.026) %
Ni: (5.66 to 12.55) %
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

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

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 □ 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
Refer to ASTM E1251 in house docunment No: WLWI-128
Si: (6.20 to 8.00) %
Fe: (0.081 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 0.33) %
Ti: (0.05 to 0.17) %

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

□ 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) , Chlorosulfonated Polyethylene Rubber (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
Standard Material Requirements for TPC Power Distribution Department Y067

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

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

M033 Immersion
CNS 3562
ISO 1817
Reference Oil No.1, Reference Oil No.3
Visual Inspection, Volume Change, Change in Hardness, Elongation Change, Tensile Strength Changes

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

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

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

(Null below)