



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

Certificate of Accreditation

(Certificate No : L2040-240220)

This is to certify that

Chung-Hsin Electric & Machinery Mfg.corp
Laboratory of Generator-Set Tests

No.25, Wende Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017 ; CNS 17025:2018

Accreditation Number : 2040

Originally Accredited : January 20, 2009

Effective Period : March 13, 2024 to March 12, 2027

Accredited Scope : Testing Field, see described in the Appendix



Scan to verify

Yi-Ling Chen

Yi-Ling Chen
President, Taiwan Accreditation Foundation
February 20, 2024

Accreditation Number : 2040

Laboratory Head : LIN, Che-Hua

19. 18 Electronic and Electric

Diesel Engine Driven Alternating Current Generating Sets

E007 Automatic starting test

CNS 10204

Approval criteria for fire services emergency generator

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Vibration test

CNS 2901

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Characteristics of momentary over current test

CNS 2901

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Construction check

CNS 2901

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

P2, total 7 pages

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



E007 Dielectric strength test

CNS 2901

CNS 10204

NEMA MG1-2016

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Measurement and test of short circuit curve test (Direct-axis synchronous reactance, Short-circuit ratio)

CNS 2901

CNS 11445-4

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Characteristics of over speed test

CNS 2901

CNS 10204

Approval criteria for fire services emergency generator

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Insulation resistance test

CNS 2901

CNS 10204

IEEE Std 43-2013

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

P3, total 7 pages

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E007 Noise level test

CNS 2901

CNS 7183

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Waveform Deviation Test

(Waveform Deviation Factor)

IEEE Std 115-2009 Part I

CNS 2901

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Harmonic Distortion Test

(THD-Total Harmonic Distortion, MHD-Maximum Harmonic Distortion, TIF-Telephone Influence Factor)

IEEE Std 115-2009 Part I

NEMA MG1-2016

CNS 2901

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Temperature Rise Test

IP 5002-7

CNS 2901

CNS 10204

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

P4, total 7 pages

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AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)
3 Ø:
AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)
AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)
AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Voltage Steady Test
(Steady-State Voltage Deviation, Voltage Regulate Rate)
ISO 8528-5: 2013 (E)
CNS 2901
IP 5002-7
MP 5002-10

1 Ø:
AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)
AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)
3 Ø:
AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)
AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)
AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Frequency Transient Test (Load Decrease)
(Recovery Time, Recovery/Regulate Rate, Transient State Rate/Transient Frequency Deviation)
ISO 8528-5: 2013 (E)
CNS 2901
IP 5002-7
MP 5002-10

1 Ø:
AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)
AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)
3 Ø:
AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)
AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)
AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Frequency Steady Test
(Steady-State Frequency Band, Frequency Droop/Regulate)
ISO 8528-5: 2013 (E)
CNS 2901
IP 5002-7
MP 5002-10

1 Ø:
AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)
AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)
3 Ø:
AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)
AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)
AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

P5, total 7 pages

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E007 Voltage Transient Test (Load Increase)
(Recovery Time, Recovery/Regulate Rate, Transient State Rate/Transient Voltage Deviation)
ISO 8528-5: 2013 (E)

CNS 2901

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Voltage Transient Test (Load Decrease)
(Recovery Time, Recovery/Regulate Rate, Transient State Rate/Transient Voltage Deviation)
ISO 8528-5: 2013 (E)

CNS 2901

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Frequency Transient Test (Load Increase)
(Recovery Time, Recovery/Regulate Rate, Transient State Rate/Transient Frequency Deviation)

ISO 8528-5: 2013 (E)

IP 5002-7

MP 5002-10

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

E007 Acceptance test with electrical load
ISO 8528-6: 2005 (E)
No.16231 Diesel Engine Driven Alternating Current Generating Sets
(The Public Construction Commission)

1 Ø:

AC220 V to AC240 V, 50/60 Hz, 6.25 kVA (5 kW) to 750 kVA (600 kW)

AC110 V to AC120 V, 50/60 Hz, 6.25 kVA (5 kW) to 500 kVA (400 kW)

P6, total 7 pages

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3 Ø:

AC3.3 kV to AC11.4 kV, 50/60 Hz, 6.25 kVA (5 kW) to 2500 kVA (2000 kW)

AC415 V to AC600 V, 50/60 Hz, 6.25 kVA (5 kW) to 5000 kVA (4000 kW)

AC190 V to AC380 V, 50/60 Hz, 6.25 kVA (5 kW) to 3750 kVA (3000 kW)

Approval Signatory: CHANG, Chia-Hao; CHIEN, Andy

(Null below)

