

BUREAU VERITAS
Certification



Certification

Awarded to

HYOSUNG CORPORATION – CHANGWON PLANT

HEAD OFFICE : #450, KONGDUK-DONG, MAPO-GU, SEOUL, KOREA
CHANGWON #1 PLANT : #454-2,3, NAE-DONG, CHANGWON-CITY, GYEONGNAM, KOREA
CHANGWON #2 PLANT: #456-6, NAE-DONG, CHANGWON-CITY, GYEONGNAM KOREA
CHANGWON #3 PLANT: #43-1, WOONGNAM-DONG, CHANGWON-CITY, GYEONGNAM, KOREA
CHANGWON #4 PLANT: #49, WOONGNAM-DONG, CHANGWON-CITY, GYEONGNAM, KOREA

Bureau Veritas Certification certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 9001:2000 / KS A 9001:2001

Scope of supply

DESIGN/DEVELOPMENT, PRODUCTION, INSTALLATION AND SERVICING FOR POWER TRANSFORMER, GIS, GCB, DS, CAST IRON , DISTRIBUTION TRANSFORMER, POLE TRANSFORMER, MOLD TRANSFORMER, GAS VT, EPOXY INSULATORS, ROTATING ELECTRICAL MACHINES, EXPLOSION PROOF MOTORS(TYPE OF FRAMEPROOF ENCLOSURE Ex d, PRESSURIZATION Ex p, INCREASED SAFETY Ex e & NON-SPARKING Ex n),GENERATOR, GEAR REDUCER, BLOWERS, DAMPERS, SILENCERS, PRESSURE VESSELS, GARAGE EQUIPMENT, CRANES, CNG PACKAGE, JIG & FIXTURE, ELECTRIC CONTROL PANEL, IPB & CIRCUIT BREAKERS, LIGHTING ARRESTER

Original Approval Date: **11 December 1993**

Subject to the continued satisfactory operation of the organization's Management System, this certificate is valid until: **30 April 2009**

To check this certificate validity please call (+662 670 4800)

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization

Date: **16 May 2007**

Certificate Number: **192824**



Bureau Veritas Certification
Using the accreditation
certificate number 008

008





Certification

Awarded to

HYOSUNG CORPORATION – CHANGWON PLANT

HEAD OFFICE : #450, KONGDUK-DONG, MAPO-KU, SEOUL, KOREA
CHANGWON #1 : #454-2,3, NAE-DONG, CHANGWON-DITY, KYUNGNAM, KOREA
CHANGWON #2 : #456-6, NAE-DONG, CHANGWON-CITY, KYUNGNAM KOREA
CHANGWON #3 : #43-1, WOONGNAM-DONG, CHANGWON-CITY, KYUNGNAM, KOREA
CHANGWON #4 : #49, WOONGNAM-DONG, CHANGWON-CITY, KYUNGNAM, KOREA

BVQI certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

ISO 14001:2004 / KS A 14001:2004

SCOPE OF SUPPLY

DESIGN/DEVELOPMENT, PRODUCTION, INSTALLATION AND SERVICING FOR POWER TRANSFORMER, POLE TRANSFORMER, MOLD TRANSFORMER, TRANSFORMER, GAS VT, EPOXY INSULATORS, ROTATING ELECTRICAL MACHINES, GENERATOR, GEAR REDUCER, BLOWERS, DAMPERS, SILENCERS, PRESURE VESSELS, GARAGE EQUIPMENT, CRANES, CNG PACKAGE, ASRS, WIND TURBINE SYSTEM, CO-GENERATION SYSTEM, WIND TUNNEL TEST WIND FACILITIES, JIG & FIXTURE, ELECTRIC CONTROL PANEL, IPB& CIRCUIT BREAKERS, IPB& CIRCUIT BREAKERS, LIGHTING ARRESTER

Original Approval Date : **21 July 2000**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until : 06 October 2009

To check the validity of this certificate please call (+82-2-567-9001)

Further clarification regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

Certificate Number: 202647 Date: 25 November 2006 Bhangwhan O



Managing office : BVQI Korea, Rm 1102, Keungil Tower., 677-25, Yeoksam-Dong, Gangnam-Gu, Seoul, Korea
Issuing office : BVQI (Holding) S.A., 2nd Floor, Tower Bridge Court, 224-226 Tower Bridge Road, London SE1 2TF

008

BUREAU VERITAS
Certification



Certification

Awarded to

HYOSUNG CORPORATION

HEAD OFFICE: #450, GONGDEOK-DONG, MAPO-GU, SEOUL, KOREA
NO.1 FACTORY : #454-2,3, NAE-DONG, CHANGWON-SI, GYEONGNAM, KOREA
NO.2 FACTORY : #456-6, NAE-DONG, CHANGWON-SI, GYEONGNAM, KOREA
NO.3 FACTORY : #43-1,2, UNGNAM-DONG, CHANGWON-SI, GYEONGNAM, KOREA
NO.4 FACTORY : #49, UNGNAM-DONG, CHANGWON-SI, GYEONGNAM, KOREA

Bureau Veritas Certification certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

OHSAS 18001:2007

Scope of supply

DESIGN/DEVELOPMENT, PRODUCTION, INSTALLATION AND SERVICING FOR POWER TRANSFORMER, GIS, GCB, DS, CAST IRON, DISTRIBUTION TRANSFORMER, POLE TRANSFORMER, MOLD TRANSFORMER, GAS VT, EPOXY INSULATORS, ROTATING ELECTRICAL MACHINES, GENERATOR, GEAR REDUCER, BLOWERS, DAMPERS, SILENCERS, PRESSURE VESSELS, GARAGE EQUIPMENT, CRANES, CNG PACKAGE, ASRS, WIND TURBINE SYSTEM, CO-GENERATION SYSTEM, WIND TUNNEL TEST FACILITIES, JIG & FIXTURE, ELECTRIC CONTROL PANEL, IPB & CIRCUIT BREAKERS, AND LIGHTING ARRESTER

Original Approval Date: **03 June 2008**

Subject to the continued satisfactory operation of the organization's Management System, this certificate is valid until: **02 June 2011**

To check this certificate validity please call (+82 2 567 9001)

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization

Date: **03 June 2008**

Certificate Number: **BK50012**



ISSUING OFFICE: Bureau Veritas Certification (Holding) Ltd.
S.A., 2nd Floor, Tower Bridge Court, 224-226 Tower Bridge Road,
London SE1 2TX
MANAGING OFFICE: Bureau Veritas Certification Korea Ltd.
Rm 1102, Keungil Tower, 677-25, Yeoksam-Dong, Gangnam-Gu,
Seoul, Korea





CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1121076 (LR 61094-1)

Master Contract: 173974

Project: 1317000

Date Issued: May 13, 2002

Issued to: **HYOSUNG INDUSTRIES CO., LTD.**
450, Kongduk-Dong
Mapo-Ku
Seoul, 121-020
SOUTH KOREA
Attention: Mr. S.T. Hwang


The products listed below are eligible to bear the CSA Mark shown



Issued by:


S. Ahn

Authorized by:


Nick Affano
Operations Manager

PRODUCTS

CLASS 4211 01 - MOTORS AND GENERATORS

Three phase squirrel cage induction motors, foot mounted or C-Face mounted, 30 hp max, 600V max, 60Hz, Class B and F, 40C ambient. 140T to 280T frame series as follows:

Open-Drip-Roof Motors: Types CDP, CDPC, HDP, ODP, RG1, RGE1, RGF1, SC, VENTPAK and VENTPAK-HE.

TEFC Motors: Types CIMPAK, CIMPAK-HE, CIMPAK-HEC, CTE, CTEC, HTE, RGZ1, RGZF1, RGZV1, SC and TEFC.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No.100

- Motors and Generators



Certificate of Compliance

Certificate Number: LR 61094-6

Revision: LR 61094-6

Date Issued: February 18, 1994

Issued To: HYOSUNG INDUSTRIES CO., LTD
5-5KA, Dangsang-Dong
Yeongdeungpo
PO Box 78
Seoul, Korea

The products listed below are eligible to bear the CSA Mark.

Issued By: Larry Moore
Edmonton, Alberta

Signature

CLASS

4228 01 MOTORS AND GENERATORS - For Use in Hazardous Locations

PRODUCTS

Class I Group D; Class II Group E,F,G
Electric Motors, Totally Enclosed Fan Cooled, Squirrel Cage, Continuous Duty, Frame
143, 145T, 182T, 184T, 213T, 215T, 254T, and 256T; 20 HP max; 600 Vac max; 50/60 Hz;
3 Phase; 3600 RPM max; Class B or Class F Insulation; Service Factor 1 for Class II,
1 or 1.15 for Class I; Temp Code - Frames 143 and 145T Class I without thermostats
T2B, Class I and Class II with thermostats T4, Frames 182T to 256T Class I without
thermostats T2D, Class I and Class II with thermostats T4A; Ambient 40 deg C.

Certificate of Compliance



Certificate Number: LR 61094-6

Revision: LR 61094-6

Date Issued: February 18, 1994

APPLICABLE REQUIREMENTS

CSA Standard C22.2 No	0-M91	- General Requirements, Canadian Electrical Code, Part II.
	0.4-M1982	- Bonding and Grounding of Electrical Equipment (Protective Grounding).
	0.5-M1982	- Threaded Conduit Entries.
	25-1966	- Enclosures for use in Class II Group E,F, and G Hazardous Locations.
	30-M1986	- Explosion-Proof Enclosures for Use in Class I Hazardous Locations.
	77-1988	- Motors with Inherent Overheating Protection
	100-92	- Motors and Generators.
	145-M1986	- Motors and Generators for use in Hazardous Locations

MARKINGS

On the main data nameplate:

Submittor's name, trademark, or the CSA file number (adjacent the CSA Mark);
Catalogue / Model designation; Complete electrical rating (amps, hertz, volts, no of phases); Service factor (if greater than unity); Frame Size; RPM; Insulation Class;
Date code / Serial number traceable to month and year of manufacture; Hazardous Location designations; Temperature code; and the CSA Mark.

The following bilingual cautions prominently displayed on or adjacent to the terminal box:

CAUTION: OPEN ALL CIRCUITS BEFORE REMOVING COVER and
ATTENTION : OUVRIR TOUS LES CIRCUITS AVANT D'ENLEVER LE COUVERCLE.

On the main data plate or inside terminal box:

Connection Diagram or marked terminals.

Certificate of Compliance

Certificate: 1201691

Master Contract: 173974 (LR 61094)


Project: 1317047


Date Issued: May 13, 2002

Issued to: HYOSUNG INDUSTRIES CO., LTD.
450, Kongduk-Dong
Mapo-Ku
Seoul, 121-020
SOUTH KOREA
Attention: Mr. S.T. Hwang

The products listed below are eligible to bear the CSA Mark shown



Issued by: 
S. Ahn

Authorized by: 
Nick Alfano
Operations Manager

PRODUCTS

CLASS 4211 01 - MOTORS AND GENERATORS

Three phase squirrel cage induction motors, foot mounted or C-Face mounted, 250 hp max, 600V max, 60Hz, Class B and F, 40C ambient. 280T to 440T frame series as follows:

Open-Drip-Roof Motors: Types CDP, CDPC, HDP, ODP, RG1, RGE1, RGF1, SC, VENTPAK and VENTPAK-HE.

TEFC Motors: Types CIMPAK, CIMPAK-HE, CIMPAK-HEC, CTE, CTEC, HTE, RGZ1, RGZF1, RGZV1, SC and TEFC.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 100 - Motors and Generators



PTDR.E79167 Motors for Use in Hazardous Locations

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HYOSUNG CORP
450 KONGDUK-DONG
MAPO-KU
SEOUL 121-720, KOREA

E79167

Class I, Group D, Class II, Groups E, F and G.

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HYOSUNG CORP

E93934

450 KONGDUK-DONG
MAPO-KU
SEOUL 121-720, KOREA

Class 130 (B) insulation system, designated 130 C , maximum 600 volts.

Class 130 (B) insulation system, designated 130C-1 , maximum 600 volts.

Class 155 (F) insulation system, designated 155 C , maximum 600 volts.

Class 155 (F) insulation system, designated 155C-1 , maximum 600 volts.

Class 155 (F) insulation system , designated HI-155, maximum 600 volts.

Class 180 (H) insulation system, designated 180C , maximum 600 volts.

Class 180 (H) insulation system , designated HI-180, maximum 600 volts.

Marking: Company name or trademark      and system designation on coil, core, enclosure or frame.

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Motors - Component

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HYOSUNG CORP

E202899

450 KONGDUK-DONG

MAPO-KU

SEOUL 121-720, KOREA

Motors.Models . FE136, FE118, FE112, FE1.536, FE1.518, FE1.512, FE236, FE218, FE212, FE336, FE318, FE536, FE518, FE512, FE7.536, FE7.518, FE7.512, FE1036, FE1018, FE1012, FE1536, FE1518, FE1512, FE2036, FE2018, FE2012, FE2536, FE2518, FE2512, FE3036, FE3018, F3012E, FE4036, FE4018, FE4012, FE5036, FE5018, FE5012, FE6036, FE6018, FE6012, FE4036, FE4018, FE4012, FE5036, FE5018, FE5012, FE6036, FE6018, FE6012, FE7536, FE7518, FE7512, FE10036, FE10018, FE10012, FE12536, FE12518, FE12512, FE15036, FE15018, FE15012, FE20036, FE20018, FE20012, followed by A, B, C, D, or E.

Motors.Models . DE136, DE118, DE112, DE1.536, DE1.518, DE1.512, DE236, DE218, DE212, DE336, DE318, DE536, DE518, DE512, DE7.536, DE7.518, DE7.512, DE1036, DE1018, DE1012, DE1536, DE1518, DE1512, DE2036, DE2018, DE2012, DE2536, DE2518, DE2512, DE3036, DE3018, D3012E, DE4036, DE4018, DE4012, DE5036, DE5018, DE5012, DE6036, DE6018, DE6012, DE4036, DE4018, DE4012, DE5036, DE5018, DE5012, DE6036, DE6018, DE6012, DE7536, DE7518, DE7512, DE10036, DE10018, DE10012, DE12536, DE12518, DE12512, DE15036, DE15018, DE15012, DE20036, DE20018, DE20012, followed by A, B, C, D, or E.,

Marking: Company's name or file number "E202899", model number, and optional electrical ratings.

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C E R T I F I C A T E

of Conformity

Low Voltage Directive 73/23/EEC
as last amended by EEC Directive 93/68/EEC

Registration No.: AN 9755467 01

Report No.: E 9766871 E 01

License Holder: Hyosung Industries Co., Ltd.

450, Gongdeok Dong, Mapo Gu
Seoul 121-020
R.O.K.

Product: MOTOR
(Motor)

Identification: Type Designations: TEFC-3HP, TEFC-5HP,
TEFC-100HP

Serial No. : n.a. (prototype)

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 73/23/EEC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.

Certification Body

Cologne, 01.12.97




Dipl.-Ing. A. Pieperit

TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln

KOREAN REGISTER OF SHIPPING
 한국선급

TYPE APPROVAL CERTIFICATE
 형식승인증서

Certificate No. : CWN03113-EL001 **Date of Approval** : 22nd October, 1984.

Product : Flame-Proof Induction Motor

Manufacturer : Hyosung Corporation, Changwon No.3 Plant
 43-1, 2 Woongnam-dong, Changwon, Kyungnam, Korea

Product Description : Type : FR 90, FR 112, FR 132, FR 160
 Flame-Proof Construction : Ex d IIB T4
 Rated Voltage : A.C. 440V
 Frequency : 60Hz
 Drawing Number : SMB 0112, SMB 0099, SMB 0080, SMB 0107


Approval Condition : Product certificate required.

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and/or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipments".

Pt 6, Ch 1, Sec 9 of the Rules for Classification, Steel Ships and IEC60079.

This Certificate is valid until 21st day of October, 2007.
 Issued at Daejeon, Korea on 12th September, 2002.

KOREAN REGISTER OF SHIPPING
 한국선급



T. Lim)
 Manager of Machinery Dept.

*Note : 1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or is not under attendance for completion of the renewal survey.
 2 : Any significant changes of products and/or manufacturing process render this certificate invalid.*