



Certificate No. 03-002144/031855

TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TYPE AND DESCRIPTION OF PRODUCT:

ALTERNATING CURRENT GENERATORS

LSAM series

MANUFACTURER:

NIDEC LEROY SOMER EPG ANGOULÊME

ANGOULÊME cedex 9 - FRANCE

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

CRS RULES FOR THE CLASSIFICATION OF SHIPS

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: 2029-07-03

Place and date: Split, 2025-07-04

Seal _____

Marinko Popović, dipl.ing.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

DETAILED PRODUCT DESCRIPTION:

Low voltage AC synchronous generators for marine environments Type LSAM.

LSAM types: 42.3, 44.3, 46.3, 47.2, 47.3, 49.3, 50.2

Cooling:	Air
Enclosure class:	IP 23 and IP 44 (derating 10%)
Winding insulation:	Class H
Temperature rise limits:	Class B, F or H
Voltage class:	220 V (208 V - 60 HZ) to 690 V
Power class:	25 kVA to 1640 kVA - 50Hz / 31,5 kVA to 2000 kVA - 60Hz
Frequency class:	50 Hz or 60 Hz
Speed:	1500 or 1800 RPM
Duty type:	S1
Power factor:	0.8, 0.9
Ambient temperature:	45°C, 50°C

APPLICATION / LIMITATIONS:

CRS Rules for the Classification of Ships.

Type Approval does not exempt the product from inspection and survey procedures required by the applicable Rules and Regulations.

TYPE APPROVAL DOCUMENTATION:

Drawings:

Catalogues references:

- LSAM Marine Rating Table, 4715 rev.r dated January 2025
- LSAM 42.3, 6246 rev.b dated April 2025
- LSAM 44.3, 5028 rev.v dated January 2025
- LSAM 46.3, 5273 rev.t dated January 2025
- LSAM 47.2, 3782 rev.p dated September 2020
- LSAM 47.3, 5941 rev.j dated January 2025
- LSAM 49.3, 5279 rev.t dated January 2025
- LSAM 50.2, 4098 rev.w dated January 2025

Test Reports:

- Test Report No. 202425T092.
- Test Report No. 202003T018.
- Test Report BF: 350096/01.
- Test Report BF: 349758/01.
- Test Report BF: 46175200003.
- Test Report BF: 350249/01.
- Test Report BF: 69362.
- Test Report BF: 351599/01.
- Test Report BF: 350139/01.

Degree of protection carried out according to EN 60034 Part 5:

- LCIE N° 171279-761905 A for IP23.
- LCIE N° 171279-761905 B for IP44.

MARKING OF PRODUCT:

The following information are to be marked on the rating plate: manufacturer's name, product type, serial number, year of manufacture, number of phases, rated power, rated current, rated voltage, rated frequency, degree of protection, thermal class and maximum ambient temperature.

CONDITIONS FOR CERTIFICATION:

Maker is responsible to inform purchaser on proper methods of use and generators maintenance.