



CERTIFICATE NUMBER

02-LD269890/1-PDA

DATE

09 December 2004

ABS TECHNICAL OFFICE

London Engineering Services

# CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of  
**ABB Automation Technologies AB**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid for five years from the date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Motors, Low Voltage

MODEL: M3AA 280

ABS RULE: 2004 Steel Vessel Rules 1-1-4/3.7 and Section 4-8-3/3

OTHER STANDARD:

AMERICAN BUREAU OF SHIPPING

Jean-Claude G. Dennemont

Engineering Type Approval Co-ordinator

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**Product:** Motors, Low Voltage

**Model:** M3AA 280

**Intended Service:**

General purpose motors for the marine environment

**Description:**

Low voltage, totally enclosed squirrel cage induction motors with aluminium frame.

**Ratings:**

Single and two speed motors with voltage range 380-440V at both 50 and 60 Hz, in 2,4,6 & 8 pole version. Duty types S1, S2 (30 min) and S6 (25%, 40% & 60 %). Insulation class F, Enclosure Protection: IP 55, IP56, IP65 and IP66.

**Service Restrictions:**

Unit Certification is required for motors of 100kW and above for essential services and are to be tested in accordance with 4-8-3/3.15 of the Rules in the presence of a Surveyor as required by 4-1-1/Table 3 of the Rules.

**Comments:**

Not Applicable

**Term of Validity:**

This product/model is covered under Product Design Assessment (PDA) Certificate # 02-LD269890/1-PDA, dated 09/Dec/2004. This PDA Certificate expires Dec of 2009. It will remain valid for the 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

**STANDARDS**

**ABS Rules:**

2004 Steel Vessel Rules 1-1-4/3.7 and Section 4-8-3/3

