



CERTIFICATE NUMBER

08-LD335802-PDA

DATE

23 May 2008

ABS TECHNICAL OFFICE

London Engineering Department

# CERTIFICATE OF Design Assessment

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

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 as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Motor, Low Voltage

MODEL: M3LP Frame Sizes 355, 400 and 450

ABS RULE: 2008 Steel Vessel Rules 1-1-4/7.7 and 4-8-3/3

OTHER STANDARD:

AMERICAN BUREAU OF SHIPPING

Jean-Claude G. Dennemont  
Engineering Type Approval Co-ordinator

**ABB Oy**

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**Product:** Motor, Low Voltage

**Model:** M3LP Frame Sizes 355, 400 and 450

**Intended Service:**

Marine Environments

**Description:**

Steel framed, three phase, water cooled, 4 and 6 pole induction motors in frame sizes 355, 400 and 450.

**Ratings:**

160 to 1100 kW, 220-690 V, 50/60Hz, 500-3600 rpm; Maximum Ambient Temperature 45C, Insulation Class F or H, Temperature Rise Class B, F or H, IP55, 56, 65 or 66

Duty type S1,S3,S4,S5,S7,S8,S9,

S2 - 30min, P = approx 1.2...1.3 x PN S1

S6 - 40%, P = approx 1.2...1.4 x PN S1

**Service Restrictions:**

Each design of motor of 100 KW (135 hp) and over intended for essential services on board ABS Class vessels is to be assessed by testing in accordance with the "type tests" schedule indicated in 4-8-3/Table 3.

Each subsequent production unit of an accepted design is to be tested in accordance with the "routine tests" schedule indicated also in 4-8-3/Table 3.

Where the weight of the motor (excluding shaft) is greater than 455kg (1000lb) anti-condensation heaters are to be installed. Coupling arrangements are to be individually approved, the key material is to be of equal or higher strength than the shaft material.

When used in conjunction with a variable speed drive the following requirements are to be complied with:- 1. NDE bearing to be insulated to avoid bearing currents. 2. Manufacturers requirements for installation of additional filters and/or reinforced insulation are to be adhered to.

**Comments:**

Method of cooling IC 71 W (Water Cooled)

**Term of Validity:**

This Design Assessment Certificate number 08-LD335802-PDA, dated 23/May/2008 will expire on 22/May/2013 or at an earlier date should there be alterations to the product's design or changes to the referenced ABS Rules and other specifications, which affect the product. Product use on or after 1 January 2009, will be subject to compliance with the ABS Rules or specifications in effect when the vessel, MODU or facility is contracted. The product's acceptability on board ABS-classed vessels or facilities is defined in the service restrictions of this certificate.

**STANDARDS****ABS Rules:**

2008 Steel Vessel Rules 1-1-4/7.7 and 4-8-3/3

