



MARINE DIVISION

Certificate number: 13650/B0 BV

File number: ACE 4/861/1

Product code: 2584I

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ABB Shanghai Motors Co. Ltd.**  
Shanghai - CHINA

*for the type of product*

### ASYNCHRONOUS MACHINES

Three-phase Cage Induction MARINE MOTORS Type M2QA Power of 100KW and over

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships  
IEC 60034 series  
IEC 60092-301

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 02 Mar 2015**

**For BUREAU VERITAS,**

At BV SHANGHAI, on 02 Mar 2010,

Jennifer Zhang



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

1 Three phase Cage Induction Marine Motors - Type M2QA...

Frame material	Cast Iron Frame
Number of poles:	2 ,4, 6 and 8
Height of frame:	280, 315, 355
Power supply:	220 to 690 V 50 Hz / 60 Hz
Enclosure and cooling	IP 55, IP56 & IP65
Ambient temperature:	50°C
Duty type:	S1 to S9
Insulation class:	F
Temperature rise:	B or F

Maximum rated power at S1

Motor type	kW 2 poles 50 Hz	kW 2 poles 60 Hz	kW 4 poles 50 Hz	kW 4 poles 60 Hz	kW 6 poles 50 Hz	kW 6 poles 60 Hz	Kw 8 poles 50 Hz	Kw 8 poles 60 Hz
280MA	/	104	/	104,0	/	/	/	/
315SA	110	127	110	127	/	/	/	/
315MA	132	152	132	152	/	104	/	/
315LA	160	184	160	184	110	127	/	104
315LB	200	230	200	230	132	152	110	127
355MA	250	287,5	255	287,5	160	184	132	152
355MB	/	/	/	/	200	230	/	/
355LA	315	362,5	315	362,5	250	287,5	160	184
355LB	/	/	/	/	/	/	200	230

### 2. DOCUMENTS AND DRAWINGS :

As per technical specification Q/ JBQS 33-2009.

### 3. TEST REPORTS :

WY08-113, WY09-319, WY08-876, WM08-191, WY08-1457, WY08-1443, 127-205/08-2, WY09-759, WM09-230, WM09-150,  
WY09-635, WY09-641, WY09-587, WY08-1747, WY08-636, WY09-068, WM09-265, WM09-264, WY08-877, WM09-223,  
WY08-1288, WY08-1524, WY09-152, WY08-1394, WY05-155.

### 4. APPLICATION / LIMITATION:

#### 4.1 - Application / Limitation of use

According to BV Rules for the Classification of Steel Ships and IEC 60092 series.  
For installation in on hazardous area.

#### 4.2 - On board installation & Maintenance requirements

According to BV Rules for the Classification of Steel Ships and IEC 60092 series.

### 5. PRODUCTION SURVEY REQUIREMENTS:



5.1 - The asynchronous motors described above are to be manufactured, examined and tested by **ABB Shanghai Motors Co., Ltd.** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Arrangements shall be made for a Society's Surveyor to attend the relevant tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme (BV Mode I) has been agreed. Relevant Bureau Veritas certificate will be issued after satisfactory completion of the procedure.

5.3 - **ABB Shanghai Motors Co., Ltd** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following site:

**ABB Shanghai Motors Company Limited**  
**88, Tianning Road,Minhang Economic and technical Development Zone**  
**Shanghai**  
**P.R. China**

**6. MARKING OF PRODUCT:**

- Name plate according to IEC 60034-1.
-  or  conformity marking as relevant.

**7. OTHERS:**

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that the **ABB Shanghai Motors Co., Ltd** will accept full responsibility for informing shipbuilders, ship-owners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the type approval certificate N° 13650/A0 BV issued on 07/12/2004 by the Society.

\*\*\* END OF CERTIFICATE \*\*\*

