



MARINE DIVISION

Certificate number: 23335/A2 BV

File number: MAT 81944 - 2010

Product code: 8153I

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

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APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

METALART CORPORATION

Shiga - JAPAN

for the type of product

STEEL FORGINGS

Steel forgings for connecting rod in carbon or low alloy steels

Requirements:

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

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: 14 Dec 2015

For BUREAU VERITAS,

At BV KOBE, on 29 Feb 2012,

Yasuo Hiramatsu



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 :

Steel forgings for connecting rod in carbon or low alloy steels.
Forgings delivered in quenched and tempered condition.
Forgings manufactured by stamping method.
Typical grades are D-SF640 or D-SFCM780 according to Daihatsu Diesel Co., Ltd. specification.

2. DOCUMENTS AND DRAWINGS :

Document number MF-900-0117 Rev.3 issued on June 9 2010, MF-900-0118 Rev.4 issued on June 9 2010.

3. TEST REPORTS :

"Approval application form for manufacturing process of forgings" issued on August 26 2010, for carbon steel forgings.
"Test result report" issued on April 26 2011, for low alloy steel forgings.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.
Chemical composition, tensile properties and Charpy V-notch test requirements are to be as per Bureau Veritas Rules NR216 and/or alternative specification mentioned on reviewed drawings, as applicable.

5. PRODUCTION SURVEY REQUIREMENTS :

The steel forgings for connecting rod are to be manufactured, examined and tested by Metalart Corporation in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.
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.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate cancels and replaces approval certificate number 23335/A.1 BV dated 15 December 2010.

*** END OF CERTIFICATE ***