DATE: 22/10/2014

OUR REF.: 2014SH1634Sqs

YOUR REF.: RINA No

FILE No. 2014-WS01-1089

SUBJECT: RINA Test Certificate FAB108414WS (2014-WS01-1089, certificate of approval of manufacturers of materials)

ENCLOSURES 1set

Enclosed please find Original certificate(s) in subject for your filing purpose.

Thank you for your attention.

Kind regards

RINA
CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS  
No. FAB108914WS

This is to certify that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<table>
<thead>
<tr>
<th>Description</th>
<th>Steel forgings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Carbon; Carbon-Manganese; Low-Alloy; Austenite stainless steel</td>
</tr>
<tr>
<td></td>
<td>Forgings</td>
</tr>
<tr>
<td>Applicant</td>
<td>SHANDONG IRAETA HEAVY INDUSTRY CO, LTD</td>
</tr>
<tr>
<td></td>
<td>NO.9001 JIWANG ROAD, ZHANGQIU, JINAN SHANDONG CHINA</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>SHANDONG IRAETA HEAVY INDUSTRY CO, LTD</td>
</tr>
<tr>
<td>Place of manufacture</td>
<td>NO.9001 JIWANG ROAD, ZHANGQIU, JINAN SHANDONG CHINA</td>
</tr>
<tr>
<td>Reference standards</td>
<td>RINA Rules for the approval of manufacturers of materials</td>
</tr>
</tbody>
</table>

Issued in SHANGHAI on August 19, 2014. This Certificate is valid until August 19, 2019.

This certificate consists of this page and 1 enclosure.

RINA Services S.p.A.  
Via Corsica, 12 - 16129 Genova  
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CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS
No. FAB108914WS
Enclosure - Page 1 of 1
Carbon
Carbon-Manganese
Low-Alloy
Austenite
stainless steel Forgings

APPROVAL CONDITIONS

- **Steel types**: carbon & carbon-manganese, low-alloy and austenite stainless steel;

- **Manufacturing process of steel**: open die forging from ingot & billet by RINA approved manufacturers;

- **Max. weight**: 4,000 kg for Ring forged pieces (flanges);

- **Condition of supply**:

<table>
<thead>
<tr>
<th>Steel grade</th>
<th>Carbon &amp; carbon-manganese</th>
<th>Low-alloy</th>
<th>Austenite stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery condition</td>
<td>Normalizing</td>
<td>Quenching + tempering</td>
<td>Solution treatment</td>
</tr>
<tr>
<td></td>
<td>Normalizing + tempering</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Survey conditions**: all forgings to be used for construction of ships classed with RINA shall meet the requirements of the RINA Rules and shall be tested accordingly.

General conditions for the approval
- The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.
- RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

SHANGHAI August 19, 2014

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