



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF  
MATERIALS  
No. FAB142819WS**

**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.

<i>Description</i>	<b>Steel forgings</b>
<i>Type</i>	<b>Carbon; Carbon-Manganese; Low-Alloy; Austenite stainless steel Forgings</b>
<i>Manufacturer</i>	<b>Iraeta Energy Equipment Co., Ltd.</b>
<i>Place of manufacture</i>	<b>No.9001 Jiwang Road, Guanzhuang Sub-district Office, Zhangqiu District Jinan (Shandong) CHINA</b>
<i>Reference standards</i>	<b>RINA Rules for the approval of manufacturers of materials</b>

*Issued in* **SHANGHAI** on **September 4, 2019**. *This Certificate is valid until* **August 19, 2024**



This certificate consists of this page and 1 enclosure



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Carbon  
Carbon-Manganese  
Low-Alloy  
Austenite  
stainless steel Forgings

**APPROVAL CONDITIONS**

- **Manufacturing process of steel** : Open die forging from ingot & billet supplied by RINA approved manufacturers;
- **Max. weight** : 4,000 kg for Ring forged pieces (flanges);
- **Condition of supply** :

Steel grade	Carbon & carbon-manganese	Low-alloy	Austenite stainless steel
Delivery condition	Normalizing Normalizing + tempering	Quenching + tempering	Solution treatment

- **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.

