



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS**
No. FAB041119WS

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>	Carbon, Carbon - Manganese and Alloyed Steel Forgings
<i>Type</i>	Carbon, C-Mn and Alloy Steel
<i>Manufacturer</i>	FUSHUN SPECIAL STEEL CO., LTD.
<i>Place of manufacture</i>	NO.8 EAST OF ANSHAN ROAD, WANGHUA DISTRICT Fushun (Liaoning) CHINA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **RINA China Marine** on **March 18, 2019**. This ~~Certificate is valid until~~ **January 11, 2024**



This certificate consists of this page and 1 enclosure



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Enclosure - Page 1 of 1
Carbon, C-Mn and Alloy Steel

APPROVAL CONDITIONS

- **Manufacture process:** Electric-arc furnace, LF refining, Vacuum degassing.
- **Raw material supplier:** The products are forged from billets produced by approved manufacturer.
- **Steel type, Max. weight and Delivery condition:**

Steel type	Max. weight (kg)	Delivery condition
CK45	28000	Annealing + Quenching + Tempering
42CrMo4	28000	Annealing + Quenching + Tempering

- **Survey conditions:** All forgings to be used for construction of ships and machinery 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.



RINA China Marine March 18,
2019 RINA Services S.p.A

March 18, 2019

