



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS**
No. FAB026019PU

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>	Steel castings
<i>Type</i>	carbon; carbon-manganese and low alloy steel castings; including steel making as ingot
<i>Manufacturer</i>	DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO., LTD.
<i>Place of manufacture</i>	22, Doosan volvo-ro, Seongsan-gu, 51711 Changwon-si (Gyeongsangnam-do) REPUBLIC OF KOREA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **BUSAN** on **April 17, 2019**. This Certificate is valid until **April 6, 2024**




RINA Services S.p.A.
Dong-Hun Lee

This certificate consists of this page and 1 enclosure



CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS

No. FAB026019PU

Enclosure - Page 1 of 1

**carbon
carbon-manganese and low alloy steel castings
including steel making as ingot**

APPROVAL CONDITIONS

Steel making process: electric arc furnace

Maximum weight: 330,000 kg

Heat treatment: normalizing by manufacturer

Survey conditions: all castings to be used for construction of ships classed with RINA are to be in compliance with the requirements of the RINA Rules and are to be tested accordingly.

General conditions for the approval

- o 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.
- o RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

BUSAN April 17, 2019



A handwritten signature in black ink, consisting of a cursive 'L' followed by a horizontal line and a small flourish.

