



APPROVAL CERTIFICATE FOR MANUFACTURING PROCESS

Certificate No. : NYK03350-SF001 **Initial Approval :** 14th December, 1989
Product : Steel Forgings
Manufacturer : Ellwood National Crankshaft Co.
1 Front Street, Irvine, Pennsylvania 16329, U.S.A.

Product Description: Low Alloy Steel Forgings for Crankshafts

- Grade : RSF-A or equivalent grade
- Forging process : Closed die forging
- Forging weight : Max. 12 000 kg
- Heat treatment : Quenched and Tempered

Approval Condition: 1. Raw Materials are to be supplied by the approved manufacturers of this Society or to be satisfactory to the Surveyor.
2. Individual Product Certification is required.

THIS IS TO CERTIFY that the manufacturing process for the above mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturer and Type Approved Equipment".

Pt. 2, Ch. 1, Sec. 6 of the Rules for Classification of Steel Ships

This Certificate is valid until 13th December, 2023

Issued at Busan, Korea on 13th March, 2019



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME19004501710) and certificate No.(NYK03350-SF001).



KOREAN REGISTER OF SHIPPING

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.