

Approval Certificate for Quality Assurance System

[Crankshafts]



Initial Approval 24 July 2008
Manufacturer Ellwood National Crankshaft Co.
1 Front Street, Irvine, Pennsylvania 16329, U.S.A.
Product Description KR-QAS Type F



Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the Quality Assurance System of the above-mentioned company / works including production methods, inspection and testing, quality control and general standards of workmanship has been audited by this Society and that the System is found to be in compliance with the requirement of this Society's Rules and / or of the recognized standards as follows.

This Certificate is valid until 28 December 2026

Issued at Busan, Korea on 29 December 2023



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.(ME24000215284) and certificate No.(NYK03350-QA001).



KOREAN REGISTER

*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.

Product Description and/or Approval Condition

Date of Issue : 29 December 2023

1. Approval of manufacturing Process for Crankshafts is to be maintained separately from this Approval.
2. This certificate is valid on condition that an annual surveillance audit for the Quality Assurance System is carried out and found to be satisfactory by this Society.
3. Test and Survey for crankshafts are to be carried out by the manufacturer in accordance with the requirements of the Society's Rules for Classification of Steel Ships and the approved manufacturer's Quality Assurance Procedure.
4. The Final Product Application is to be forwarded to KR New York Office through e-MESIS together with the manufacturer's test records for Certification and Endorsement thereon by the Surveyor.
5. The Confirmation Survey is to be carried out by the Surveyor of KR New York office at least once a year.
6. Each certified crankshaft is to be marked KRQ + Product Certificate No. + Serial No. by the person in charge of Manufacturing Survey.
7. The special steel stamp KRQ supplied by this Society is to be kept by the person in charge of Manufacturing Survey.
8. In case where other organizations especially request witnessing of the test by the Surveyor or there is any problem with the quality of certified products, this Society may directly issue, with prior notice, the product certificate upon witnessing of the tests regardless of afore-stated survey delegation.
9. All customer complaints to products certified under this Quality Assurance System are to be reported to this Society.
10. The following documents are to be prepared by the manufacturer and made available at the request of the Surveyor and unscheduled visits with regard thereto are to be also permitted to the Surveyor of this Society ;
 - Certificate for material test of the crankshafts
 - Inspection reports for NDTs and dimension check for Finish Machined Crankshafts.
 - Documents and data for Quality Control Activity

< End of Certificate >

Endorsement for Periodical Audit

Date of Issue : 29 December 2023

Anniversary Date : 29 December

This is to certify that the Production Quality Assurance Scheme is in compliance with the relevant requirements to obtain / retain the Society's approval in accordance with and is valid until 29 December 2024.

■ Periodical/Confirmation/Occasional Audit

Periodical/Confirmation/Occasional Audit has been carried out and Annual Plant Audit is valid until

Branch(Office) : _____
Date : _____
Surveyor : _____

■ Periodical/Confirmation/Occasional Audit

Periodical/Confirmation/Occasional Audit has been carried out and Annual Plant Audit is valid until

Branch(Office) : _____
Date : _____
Surveyor : _____

■ Periodical/Confirmation/Occasional Audit

Periodical/Confirmation/Occasional Audit has been carried out and Annual Plant Audit is valid until

Branch(Office) : _____
Date : _____
Surveyor : _____

■ Periodical/Confirmation/Occasional Audit

Periodical Survey has been carried out and the product is valid until

Branch(Office) : _____
Date : _____
Surveyor : _____

Note : The approval will be automatically suspended and the Certificate become invalid if not endorsed annually within 3 months after the anniversary date of this Certificate