DNV·GL

Certificate No:
MEDG00000HZ

CERTIFICATE OF CONFORMITY – EC (MODULE G)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the On board exhaust gas cleaning systems

with type designation and serial number
ME0402B I-Type open loop EGC system installed onboard ANANGEL SHAGANG (IMO: 9004786) - 1804.0402.01

Issued to
Shanghai Marine Diesel Engine Research Institute
Shanghai, 020, China

is, by design assessment and product verification, found to comply with
Regulation **(EU) 2018/773,**
item No. MED/2.10. Marpol 73/78 as amended, Annex VI Regulation 4 and IMO Res. MEPC.259(68)

USCG Approval No: **N/A**
Further details of the equipment and conditions for certification are given overleaf.

Issued at **Hamburg** on **2019-09-18**

DNV GL local station:
Shanghai

Approval Engineer:
Mirko Schlegelmilch

Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
Head of Notified Body

0098/yyyy

0098: Notified Body number undertaking quality surveillance
yyyy: The year in which the mark is affixed

The product liability tests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate remains valid unless suspended, withdrawn, recalled or cancelled, provided this equipment is not modified without the acceptance of the notified body named herein.

This certificate authorises the manufacturer to affix the "Mark of Conformity" (wheelmark) to the product described herein.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description
On board exhaust gas cleaning system used as an alternative compliance method with fuel oil Sulphur limits.

Application/Limitation
According to MEPC.259(68) - Scheme B, compliance with fuel oil sulphur requirements is demonstrated by continuous emission monitoring. The monitoring system is subject to periodical surveys according to MEPC.259(68).

Type Examination documentation
SECP-B (SOx Emissions Compliance Plan, Scheme B), Version No.: V2, approved: 2019-09-18
ETM-B (EGC Technical Manual, Scheme B), Version No.: V5, approved: 2019-03-28
OMM (On-board Monitoring Manual), Version No.: V4, approved: 2019-03-18
EGC Record Book, Version No.: V2, approved: 2019-03-12
pH Analysis of Discharge washwater Plume, Revision A: 2019-03-27, approved: 2019-03-28

Tests carried out
On-board verification of Exhaust Gas Cleaning System
Test report:
- DNV GL Checklist for verification of Exhaust Gas Cleaning Systems (EGC 631), date of issue: 2019-09-05

Marking of product
The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions and date of manufacture. In addition, the manufacturer shall affix the Mark of Conformity followed by the DNV GL Notified Body No. 0098 and the production year (2 or 4 digits).