

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Engine Subsystem**

with type designation(s)

Common Rail Fuel Injection System for Diesel Engines, Mechanical Part

Issued to

**Liebherr-Components Deggendorf GmbH
Deggendorf, Bayern, Germany**

is found to comply with

DNV GL rules for classification – Ships**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2019-06-05**This Certificate is valid until **2024-06-04**.DNV GL local station: **Augsburg**Approval Engineer: **Hajo Gerken**for **DNV GL**

**Olaf Drews
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Type approved for following common rail components:

LI2.X-22 SF
LI2.X-22 TF
LI3.13-22
LP11.2-22
LP11.5-22
LC1.1-25
LRXX.X-22 W
LRXX.X-25 F

Application/Limitation

For Multi Engine Installations on Board of DNV GL Vessels.

An integration test as part of the type approval process of the particular diesel engines is to be performed in competent surveyor's presence.

Type Approval documentation

Tests carried out

Marking of product

According to LIEBHERR standard.

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.