Certificate No:
TAM00001BT

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Spark Arrestor

with type designation(s)
5.9096.00010 Funkenfänger

Issued to
Kaeser Kompressoren SE
Coburg, **Germany**

is found to comply with
DNV class programme DNV-CP-0282 – Type approval – Spark arrestors
DNV rules for classification – Ships
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021

Application :

The spark arrester is approved for use in the exhaust line of diesel, gas and any reciprocating engine, boilers and equipment containing sources of ignition installed onboard ships or offshore units classed by DNV.

Issued at **Høvik** on **2023-09-29**
This Certificate is valid until **2028-09-28**.
DNV local unit: **Augsburg**

Approval Engineer: **Amir Dzaferi**

for **DNV**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description
The Spark Arrester is of collection design. The spark arrester may be installed on the Cummins engine QSF 3.8-C130 or on an engine / boiler with similar exhaust gas flow.

Application/Limitation

Material:	1.4301 304L stainless steel
Media temperature range of spark arrester:	From -15 to 550°C
Flow speed:	70 m/s
Maximum exhaust gas flow:	368 l/s

Type of arrestor to be chosen according to the maker's instructions.

Tests carried out
Tested on 18.07.2023 (witnessed by DNV) according to EN-1834-1 [6.4.2 Visual test]. Spark arrester installed after the Cummins engine QSF 3.8-C130 which is driving the screw compressor M120.

Exhaust gas volume flow – total gas flow of tested engine: 368 l/s @ 524°C.

Marking of product
The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment
Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval certificate was issued.

In case where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other conditions
DNV Product certificate is not required.

END OF CERTIFICATE