

TYPE APPROVAL CERTIFICATE

Certificate No: **TAF00008M** Revision No:

This	ic	to	certify

That the Jet Fire Protection

with type designation(s) **ENERGY Firecover**

Issued to

KAEFER ENERGY AS Stavanger, Norway

is found to comply with **DNV GL offshore standards**

Application:

Approved for use as jet fire protection of valves and flanges.

This Certificate is valid until 2021-04-28.

Issued at Høvik on 2016-11-25

for DNV GL

DNV GL local station: Stavanger

Approval Engineer: Helge Bjørnarå

Petter Langnes
Head of Section

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 1 of 3

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.

Job Id:

Certificate No: TAF000008M

Revision No: 1

Product description

ENERGY Firecover®

Is a box mounted over a valve or flange and consists of two half fitted together with steel latches maximum 175 mm apart. The box is made of 0.7 mm steel and insulated with 8 or 24 mm PittChar XP (ENERGY Fireboard®).

The box may be fitted with an inspection hatch (maximum 470 mm x 270 mm).

The box may also incorporate a Ø15 mm drain plug type ENERGY Drainplug®.

Application/Limitation

Filling ratio "Volume of valve or flange" / "Volume of box" not to exceed 38 %. Ratio "Surface area of box" / "mass of valve or flange" to be maximum 0.013 m²/kg.

Approved for use as jet fire protection of valves and flanges (Type of fire/Type of application/Critical temperature rise (°C/Period of resistance (minutes)):

Insulation: 8 mm PittChar XP (ENERGY Fireboard®)

- JF/valves and flanges/90/15
- JF/valves and flanges/145/30
- JF/valves and flanges/240/60
- JF/valves and flanges/325/90
- JF/valves and flanges/415/120

Insulation: 24 mm PittChar XP (ENERGY Fireboard®)

- JF/valves and flanges/57/15
- JF/valves and flanges/83/30
- JF/valves and flanges/102/60
- JF/valves and flanges/155/90
- JF/valves and flanges/173/120
- JF/valves and flanges/290/180
- JF/valves and flanges/401/240
- JF/valves and flanges/504/300JF/valves and flanges/602/360

The effect of unprotected valve spindles penetrating the protection box is not accounted for, and must be evaluated for each case.

Any project specific design solutions, arrived at on basis of this certificate, are to be further validated by the project specific approvals, carried out by the appointed verifying authority for each project, in each case at the detailed engineering stage.

The intumescent coating is not defined as non-combustible. The protection box should not be used in accommodation or in enclosed areas.

The approval refers only to the fire resistance properties of the system.

Each product is to be supplied with its manual for application and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 2 of 3

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Tests carried out

Tested according to OTI 95 634 and ISO 22899-1.

Marking of product

The product or packing shall be marked with the name of the manufacturer, type designation and fire technical rating, as applicable.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNVGL-CP-0338 Section 4.

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 3 of 3