DNV·GL

Certificate No:
TAF000010K

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Jet Fire Protection

with type designation(s)
"ContraFlame" - Fire barrier

Issued to
Advanced Insulation Limited
GLOUCESTER, United Kingdom

is found to comply with
DNV GL offshore standards

Application :

Approved for use as a jet fire barriers.

Issued at **Høvik** on **2019-07-03**
This Certificate is valid until **2024-07-02**.
DNV GL local station: **Manchester**

for **DNV GL**

Approval Engineer: **Karolina Kusmider**

Mårten Schei-Nilsson
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.

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Product description

"ContraFlame" - Fire barrier:
10 mm thick steel division insulated according to the following alternatives:

Alternative 1. "ContraFlame" System composed of one coat of phenolic epoxy primer, two layers of composite consisting of a resin based syntactic foam insulation (C50) with total thickness of 10 mm covered with fibre reinforced resin outer skin of total thickness of 4 mm consisting of four layers; Woven silicate cloth (outer layer), CSM, Bi-axial cloth and CSM (inner layer).

Alternative 2. "ContraFlame" System composed of one coat of phenolic epoxy primer, two layers of composite consisting of a resin based syntactic foam insulation (C50) with total thickness of 30 mm covered with fibre reinforced resin outer skin of total thickness of 4 mm consisting of four layers; Woven silicate cloth (outer layer), CSM, Bi-axial cloth and CSM (inner layer).

Application/Limitation

Approved for use as a jet fire barrier of rating (Type of fire/Type of application/Critical temperature rise (°C)/Period of resistance (minutes)) for the alternatives above:

Alternative 1. JF/barrier/180/15, JF/barrier/400/90.
Alternative 2. JF/barrier/180/40, JF/barrier/320/120.

Restricted application: Fire against insulation side.

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

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

1. Test report No. R8262, issue 01, dated 2005-07-19 from Advantica, Leicestershire, United Kingdom
2. Test report No. R7799, issue 01, dated 2005-03 from Advantica, Leicestershire, United Kingdom

1. Application procedure No. AP01.3 Issue 05, dated 2011-06-22 Advanced Insulation Systems Ltd, Gloucester, United Kingdom.

1. Drawing. No. R8262/001, Rev. 0, dated 2013-06-28 from Advanced Insulation, Gloucester, United Kingdom.
2. Drawing. No. R7799/001, Rev. 0, dated 2013-06-28 from Advanced Insulation, Gloucester, United Kingdom.

Tests carried out

Tested according to OTI 95 634
Tested according to ISO 22899-1:2007 (alternative 1)

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating.

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.