

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Bulk Loading Hoses with Permanently Fitted Couplings**with type designation(s)  
**Danchem, Danoil, Danflon**Issued to  
**Dantec Ltd**  
**Wirral, Merseyside, United Kingdom**is found to comply with  
**International Code for the Construction and Equipment of Ships Carrying Dangerous Chemical in Bulk, 2007 Edition****Application :****Product(s) approved by this certificate are accepted for the non-class scope services and are not evaluated against the DNVGL classification requirement.****Temperature range:** -30°C to +100°C  
**Max. working press.:** 14 bar  
**Sizes:** 25, 38, 50, 65, 75, 80, 100, 150, 200 and 250 mmIssued at **Høvik** on **2018-05-04**for **DNV GL**This Certificate is valid until **2022-12-31**.DNV GL local station: **Manchester**Approval Engineer: **Mehdi Rowshan****Marianne Spæren Marveng**  
**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.



Job Id: **262.1-027702-1**  
Certificate No: **TAP00001AX**

## Product description

Composite hoses with permanently end fitting and standard flanges based on following description:

Hoses: Danchem, Danoil, Danflon  
End fittings: Part No's DAN-FF-25 to Dan-FF-250  
End flanges: ASA 300, ASA 150, PN10/16 or PN10 PN16.

Hose material:  
Inner and outer helix material: Stainless steel 316/Galvanized mild steel/Coated steel  
Inner thermoplastic layer: Polypropylene/Nylon/ECTFE/PTFE  
Outer thermoplastic cover: Nylon/Polyester/Polypropylene

Fittings & Flanges material:  
Carbon steel: ASTM/ASME A105N  
Stainless Steel: ASTM/ASME A182 F304/L and F316/L

Manufacturer of hoses: Dantec Ltd  
Manufacturer of couplings: Elaflex GmbH

## Application/Limitation

- The hoses are only approved for 200 pressure cycle test and burst test, no other test has been evaluated by this certificate.
- Each hose is to be hydraulic pressure tested to 1.5 times the working pressure.
- These hose assemblies shall not be considered fire safe.
- These hoses have not been "End load" tested and do not have rated load test.
- Electrical resistance and vacuum test have not been performed on these hoses.

## Type Examination documentation

Manufacturer's datasheet.

Burst, pressure cycle test reports 2009-01-24, 2009-01-26, 2009-01-30, 2009-02-02 and 2009-02-03.

Drawings:

DAN1002-2 dated September 2008  
DAN5004-1 dated January 2007  
DAN5004-2 dated November 2009  
DAN5005-1 dated November 2009  
DAN4003-1 dated February 2006  
D0794-1 dated June 2004  
DAN-CF-25-S4 dated 23.04.2015  
DANFF-ASA300 dated 12.03.2018

## Tests carried out

200 pressure cycle test and burst test.

## Marking of product

For traceability to this Type Approval, the products are at least to be marked with:

- Manufacturer's name or trade mark
- Type designation
- Maximum working pressure
- Size

## Certificate Retention Survey

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 approval are complied with. Reference is made to DNVGL-CP-0338.