



# DET NORSKE VERITAS

## TYPE EXAMINATION CERTIFICATE

CERTIFICATE NO. **P-14583**

This is to certify that the  
**Bulk Loading Hoses with Permanently Fitted Couplings**

with type designation(s)  
**Danchem, Danoil, Danflon**

Manufactured by  
**Dantec Ltd**  
**Wirral, United Kingdom**

is found to comply with  
**International Code for the Construction and Equipment of Ships Carrying Dangerous Chemical in Bulk**

Application  
**Cargo hose for oil and chemicals for ship to shore transfer.**

**Temperature range:** -30°C to +100°C  
**Max. working press.:** 14 bar  
**Sizes:** 25 to 250 mm

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2013-09-11**

DNV local station: **Liverpool**

Approval Engineer: **Tom Berg-Nielsen**

for **Det Norske Veritas AS**

.....  
**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 Examination Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

## Product description

Composite hose with permanently fitted flanges.

### Materials

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

End flanges: ASA 300, ASA 150, PN10/16 or PN10 PN16.

### Flange materials

Carbon steel: ASTM/ASME A105N  
Stainless Steel: ASTM/ASME A182 F304/L and F316/L

## Application/Limitation

The hoses are to be mounted in accordance with the manufacturer's instructions.  
The hoses may not be permanently fitted.  
The respective Government Authorities Regulations are to be complied with.  
Each hose is to be hydraulic pressure tested to 1.5 times the working pressure.

## Type Examination documentation

Manufacturer's datasheet.  
Test reports 2009-01-24, 2009-01-26, 2009-01-30, 2009-02-02 and 2009-02-03.

### Drawings:

DAN5004-1 dated January 2007  
DAN4003-1 dated February 2006  
D0794-1 dated June 2004

## Tests carried out

200 pressure cycle test and burst test.

## Marking of product

For traceability to this type approval the products are marked:

- Dantec: Danchem, Danoil or Danflon
- Hose size and code
- Pressure rating

## Certificate Retention Survey

For retention of the Type Approval, DNV Surveyor shall perform a survey every second year - and before the expiry date of this certificate - to verify that the conditions for the type approval are complied with and to witness the burst test on a selection of sizes.

**END OF CERTIFICATE**