



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. F-18324
This Certificate consists of 3 pages

This is to certify that the
Combined Jet/Spray Water Nozzle

with type designation(s)
RAUPLAN MULTIFIRE BRANCHPIPES

Manufactured by
Rauplan Oy
TURKU, Finland

is found to comply with
Det Norske Veritas' Offshore Standards
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

Application
Approved for use throughout the fire line except for hose reels in the accommodation.

Place and date
Høvik, 2007-04-20
for DET NORSKE VERITAS AS

This Certificate is valid until
2011-06-30

Hilde Smedal Thunes
Head of Section

Local Office
DNV Turku / Åbo

Håkon Laskemoen
Surveyor

Notice: 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.

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.



Cert. No.: F-18324
File No.: 475.12
Case No.: 262.1-002944-1

Type Approval documentation

Certification in accordance with Certification Note No. 1.2, Type Approval, December 1996.

Test reports:

No. TUR07-009 dated 16 January 2007 from DNV Turku.
Test dated 12 September 1997 from Rauplan OY.

Certificate Retention Survey Report No. TUR-06-068 dated 28 August 2006 from DNV Turku.

Drawings Nos:

010997, Rev. 0 dated 3 July 1997 (Type A)
281097, Rev. 0 dated 6 November 1997 (Shut off valve)
271097, Rev. 0 dated 26 August 1997 (Type B)
070797, Rev. 0 dated 8 July 1997 (Type L)
070797 LC, Rev. 0 dated 8 July 1997 (Type LC)
020997, Rev. 0 dated 8 July 1997 (Type S)
100996, Rev. 0 dated 25 February 2007 (Adjusting plates axle)
151196, Rev. 0 dated 3 March 2007 (Frame)
130197, Rev. 0 dated 28 February 2007 (Adjusting Sleeve)
140197, Rev. 0 (Frame)
110997, Rev. 0 dated 28 February 2007 (Adjusting Grip)
240997, Rev. 0 dated 28 February 2007 (Adjusting Plate)
011097, Rev. 0 dated 28 February 2007 (Sleeve coupling)
All drawings from Rauplan OY.

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Certificate retention survey

Det Norske Veritas' surveyor is to be given permission to perform Certification Retention Surveys at any time during the validity period of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in item 4.3, Certification Note No. 1.2.

END OF CERTIFICATE



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Product description

“RAUPLAN MULTIFIRE BRANCHPIPES”

Long and short combination hose nozzle for jet and diffuser spray (conical) with or without ball valve of types; 12L, 16L, 19L, 12LC, 16LC, 19LC, 12A, 16A, 12B, 16B, 12S and 16S. Type A has applicator.

Maximum working pressure: 12 bar (10 bar for Types A and S)

Application/Limitation

Only the Rauplan Multifire Branchpipes; 12L, 16L, 19L, 12LC, 16LC, 19LC, 12A, 16A, 12B, 16B, 12S and 16S are covered by this type approval certificate. Fire hose and coupling submitted for this type approval are reviewed, but shall be submitted and approved for each project.

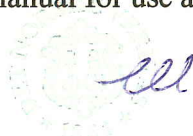
Approved for use throughout the fire line except for hose reels in the accommodation.

The following performance data is taken from test report and data sheet.

Spray setting (max degree - 120°)		
Nozzle	Flow rate at 10 bar [litre/min]	Throw length at 10 bar [m]
12L (12LC, 12B)	630	11
16L (16LC, 16B)	670	9
19L (19LC, 19B)	770	9
12A (12S)	630	11
16A (16S)	670	9

Jet setting		
Nozzle	Flow rate at 10 bar [litre/min]	Throw length at 10 bar [m]
12L (12LC, 12B)	230	32
16L (16LC, 16B)	380	36
19L (19LC, 19B)	300	29
12A (12S)	230	32
16A (16S)	380	36

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



Handwritten mark or signature in blue ink.