



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. F-18662

This is to certify that the
Class H Penetration

with type designation(s)
HAWKE TRANSIT SYSTEM

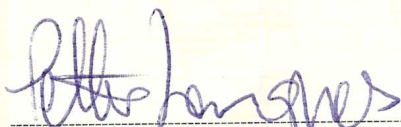
Manufactured by
Hawke Transit System - HTS
TORRELAVEGA CANTABRIA, Spain

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 as penetration system in H-class bulkheads and decks for approved cables

Høvik, 2010-06-02
for Det Norske Veritas AS

This Certificate is valid until
2014-06-30



Petter Langnes
Head of Section



DNV local office:
DNV Bilbao



Amir Dzaferi
Surveyor

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.



Certificate No.: F-18662
File No.: 471.78
Job Id.: 262.1-000522-3

Product description

“Hawke Transit System”

composed of HM-type frames in sizes 2, 4, 6 & 8 and any combination, with either WK5 or WK5H blocks (also accepted to be EMP coated). The frames are to be welded to the unexposed side of the construction. Cast steel- or GRP composite compression plates may be used.

H-0 : HMB and HMBX frames
H-60, H-120 : HM, HMX, HME, HMEX, HMB, HMBX, HMO, HMOX, HMF, HMFx, HMR, HMRX, HMFOB and HMFOBx frames.

Bulkhead/deck insulation also to cover frame and blocks up to the cables, for H-120 also in between cables.

The “Hawke Transit System” is inspectable after installation by number and colour codes on the blocks.

Application/Limitation

Penetrations certified for use in H-120 bulkheads/decks may be used in H-60- and H-0 bulkheads/decks, and penetrations certified for use in H-60 bulkheads/decks may be used in H-0 bulkheads/decks. The penetrations are to be insulated locally with as-tested insulation details.

The penetration is also approved for Water tightness and gas tightness in steel bulkheads and steel decks as follow:

<i>Model</i>	<i>Size</i>	<i>Water tightness Approval pressure</i>	<i>Gas tightness Approval pressure</i>
HMX, HMFx, HMOX, HMEX, HMBX, HMRX	8	1.67 bar	0.37 bar
	6	2.33 bar	2.53 bar
	4	5.00 bar	3.33 bar
	2	2.67 bar	3.73 bar

Penetration systems are not to be used for penetrating boundaries of tanks.

No more than 40% of the inside cross sectional area of each transit should be occupied by cables. Also, the cables shall not touch each other or the steel sleeve.

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue). Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration.

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

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, April 2009.

Test Reports No.:

39601 dated 12 August 1986 (Bulkhead, H-0),
39312 dated 12 August 1986 (Bulkhead, H-120),
49759/A dated 21 February 1990 (Bulkhead, H-60),
101916 dated 12 March 1998 (Bulkhead, H-30),
Assessment report No.170283 dated 14 February 2008, all from Warrington Fire Research Centre, Warrington, UK.

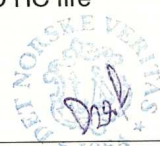
Test report Cert. No.: BBO 08-6049 for water tightness and gas tightness witnessed by DNV Bilbao on 8 May 2008.

Letter dated 7 April 2005 from Hawke Transit System, England, confirming transfer of products to Fernandez Jove, S.A. who will be trading as Hawke Transit System – HTS.

Retention Type Approval Survey Report dated 7 December 2009 from DNV Bilbao.

Tested according to IMO FTFC Part 3 (IMO Res. A.517(13) as modified, IMO Res. A.754(18)) and NPD HC fire load/temperature curve.

Tested according to DNV Type Approval Programme 8-471.19-1 (water tightness and gas tightness)





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Marking of product

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

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 Standard for Certification No. 1.2 item 4.

