

MARINE DIVISION

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Certificate number: 11613/B0 BV

File number : ACE 13/801/01

Product code : 4209H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

Den Norske Hoyttalerfabrikk
Kragero - NORWAY

for the type of product

EMERGENCY LOUDSPEAKER SYSTEMS

Loudspeakers: MH series, HP series.

Regulations and standards :

BV Rules for the Classification of Steel Ships.
IEC 60065 - IEC 60068 - IEC 60945.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 13 Feb 2013

At Paris la Défense, on : 01 Feb 2008

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV OSLO
Surveyor : R. Marstein

L.COURREGELONGUE



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Loudspeakers Type	IP rating	SPL IW / Im (db)	Effective Freq. range (Hz)
HP-20T	67	110	310-8000
HP-30T	67	110	310-8000
HP-6CT	67	100	500-7500
HPS-6CT	67	100	500-7500
HP-6	67	101	500-7500
HPS-6	67	100	500-7500
MH-15T	55	99	140-16000
MH-30T	55	96	85-16000
MH-50T	55	104	140-16000

2. DOCUMENTS AND DRAWINGS :

Drawings specification filed in the DNH catalogue dated 11/2001.

3. TEST REPORTS :

HP series:

Test report issued by Nemko, dated 05/09/2001, referenced 200112102/C1/02

Test report issued by Nemko, dated 21/08/2001, referenced 200112105

Test report issued by Nemko, dated 09/08/2001, referenced 200112106/S1/02

Test report issued by Nemko, dated 13/07/2001, referenced 200112102/C1/01

Test report issued by Nemko, dated 13/07/2001, referenced 200112102/C2/01

Test report issued by Nemko, dated 13/07/2001, referenced 200112102/C3/01

Test report issued by Nemko, dated 13/07/2001, referenced 200112102/C5/01

Test report issued by Nemko, dated 09/08/2001, referenced 200112106/S1/01

Test report issued by Nemko, dated 21/08/2001, referenced 200112105.

MH series:

Test report issued by Nemko, dated 13/07/2001, referenced 200112102/C1/05

Test report issued by Nemko, dated 09/08/2001, referenced 200112106/S1/05

Test report issued by Nemko, dated 21/08/2001, referenced 200112105.

4. APPLICATION / LIMITATION :

- cable,

- public address and general alarm system.

When used for a public address or general system, loops and loudspeakers lay out are to be submitted for approval.

To be installed in compliance with Regulations and Rules stated on front page of the Certificate.

When used for an emergency alarm system the cables shall be of a fire-resistant type.

Satisfactory performance tests shall be witnessed on each installation by the Society's Surveyor after installation on board.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The Loudspeakers: MH series, HP series are to be manufactured, examined and tested by **Den Norske Hoyttalerfabrikk** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end **Den Norske Hoyttalerfabrikk** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **Den Norske Hoyttalerfabrikk** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

**Den Norske Hoyttalerfabrikk
GRUVEVN 2-4
3770 Kragero
NORWAY**

6. MARKING OF PRODUCT :

- Maker's name or trade mark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested.

7. OTHERS :

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the system at any time and that **Den Norske Hoyttalerfabrikk, Kragero - NORWAY**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the system and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 11613/A1 BV issued on 02/09/2003 by the Society.

*** END OF CERTIFICATE ***

