

MARINE DIVISION

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Certificate number: 02898/E2 BV

File number : ACM 167/2303/01 and 02

Product code : 2237H

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

WINTEB BV
WINSCHOTEN - NETHERLANDS

for the type of product

AUTOMATIC OPEN TANK VENTING SYSTEMS

Air Pipe Heads - Type WIKO 5000 and WIN 2000

Regulations and standards :

BUREAU VERITAS Rules for the Classification of Steel ships / IACS Unified Requirements P3 1991, Rev. 2 2004

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.

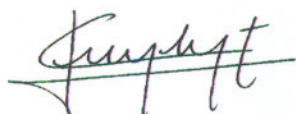
This certificate is valid until : 23 Apr 2009

At Paris la Défense, on : 20 Apr 2007

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV ROTTERDAM
Surveyor : J. Huis


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

Air Pipe Heads - Type WIKO 5000 and WIN 2000

1.1 Ratings

> Size range type WIKO 5000

- Series 5000-1, 1-A, 1-B	DN 50 to DN 400
- Gooseneck	DN 50 to DN 250
- PE-ball (outside diameter)	60, 90, 130, 175, 200, 280, 300 mm

> Size range type WIN 2000

- Type 1	DN 50 to DN 250
- Type 1-B	DN 50 to DN 125
- Type 1 and 1-C	DN 450
- PE-ball (outside diameter)	60, 75, 90, 105, 130, 155, 200, 250, 480 mm

> Flange connections according to international standards

1.2 Material specification

Casing	G-AlMg3Si, G-AlMg5Si, GG-25, GGG-40, G-CuAl10Ni, CuNi10Fe1Mn, G-CuSn10Zn, G-CuZn33Pb, G-AlSi7Mg
Ball	PE Polyethylene
O-rings	NBR Nitrile Rubber

Option

Flame screen / Insert screen: stainless steel

2. DOCUMENTS AND DRAWINGS

2.1 Manufacturer's brochure

2.2 Drawings:

- N° 88-001 WIKO De and Aerators Type 5000 DN 50 to DN 125 dated 15/11/1988
- N° 88-002 WIKO De and Aerators Type 5000 DN 150 to DN 400 dated 15/11/1988
- N° 88-003 WIKO De and Aerators Type 5000 DN 50 to DN 250 dated 12/12/1988
- N° WIN 2000 - 01 rev. 03 WIN 2000 General drawing dated 19/12/2001

3. TEST REPORTS

3.1 Type WIKO 5000

- Test report of Hochschule Bremen dated 02/05/1987 and 01/12/1988
- The tightness of the closing devices was tested in normal and in inclined positions of 40°

3.2 Type WIN 2000

- Test report of Hochschule Bremen N° WIN 2000/1 dated 15/12/2000
- The tightness of the closing devices was tested in normal and in inclined positions of 40°

3.3 New tests on tightness and flow characteristics of Winteb Air Pipe Heads WIN 2000 Type 1, WIN 2000 Type 1-B, WIKO 5000 Type 1 and WIKO 5000 Type 1-A (all equipped with screens in place) according to IACS Requirements 1991, Rev. 2 2004 were performed in the Laboratory for Hydraulic Machinery of the Hochschule Bremen, University of applied Sciences and found in order. Test reports N° WINTeB 2005/1, A1; A2; A3 dated 31/05/2005.

4. APPLICATION / LIMITATION

- 4.1 May be used on air pipes from tanks intended for ballast water, fresh water and oil fuel fluids.
- 4.2 As automatic closing devices on air and overflow pipes which terminate above the open deck.
- 4.3 These air pipes are not to be used for cargo tanks of tankers. Winteb aluminium air heads are acceptable for the ballast tanks in open deck cargo area's of tankers as defined in Solas.
- 4.4 The height of air pipes above deck is to be in accordance with the Bureau Veritas Rules.
- 4.5 The additional strength requirements to resist green sea forces shall be considered for ships having to comply with Bureau Veritas Rules Pt C, Ch 1, Sec 10 [9.1.9].
- 4.6 Gooseneck types may only be fitted as tank air pipes.
- 4.7 Aluminium airheads other than gooseneck types may be accepted as vent pipes if mounted on steel pipes of minimum required scantlings and provided with a steel closing device within the steel part of the vent pipe.
- 4.8 A general examination of each air pipe head will be carried out by the Society's Surveyor during the ship survey.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and Bureau Veritas Rules and Regulations stated on the front page of this certificate.

5.2 Production sites are to be recognized by Bureau Veritas as per NR 320 for HBV products. To this end, the manufacturer has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 The manufacturer has declared to Bureau Veritas that the products detailed in this certificate are manufactured at the production site stated on the front page of this certificate.

5.4 No Bureau Veritas certificate is required for the approved product.

6. MARKING OF PRODUCT

Air pipe heads should be marked with:

- Manufacturer's name or logo
- Model
- Size

7. OTHERS

7.1 This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the approved products and of the conditions of this approval.

7.2 This certificate supersedes the Type Approval Certificate N° 02898/E1 BV issued on 17/10/2005 by the Society.

***** END OF CERTIFICATE *****