

## 15 ppm - BILGE ALARM

The BilgMon 488 Bilge Alarm is type approved to the new IMO Requirements of MEPC.107(49). BilgMon 488 is a further development of a proven design successfully delivered to more than 1000 vessels. Simple operation combined with a detachable, smart measuring cell makes the BilgMon 488 a favourite with the ship's crew. Small dimensions makes the BilgMon 488 ideal for replacement on existing bilge water separators.

### TECHNICAL FEATURES

- Power supply: 220/110 VAC 50/60 Hz
- Alarm output: NO/NC
- Automatic stopping device output: NO
- Recorder output: 0-20 or 4-20 mA
- Separator status input: NC
- Output for optional fresh water flushing valve 220/110 V
- Inlet and drain valves: BSP 1/4"
- Outlet connection: BSP 1/4"
- Smart detachable measuring cell



### OPTEC-TEAM WORLD WIDE SERVICE NETWORK

World wide network of trained Service agents  
Installation, Commissioning & Crew training  
Life Time Maintenance program  
Local spare parts stock  
24 hour service phone

The BilgMon 488 Bilge Alarm is developed and manufactured by Brannstrom Ltd of Gothenburg, Sweden. Sales, application advice and services by Optec-International.

#### OPTEC-International Ltd

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## BilgMon 488 Specification

### *Measurement:*

Oil range:	0 – 30 ppm
Resolution:	0.1 ppm
Accuracy:	According to IMO MEPC.107(49)
Response time:	< 3 sec

### *Alarms:*

Alarm 1 (valve control) delay:	0-10 sec user adjustable
Alarm 2 (annunciation) delay:	0-600 sec user adjustable
Alarm points 1 and 2:	1-15 ppm user adjustable
Alarm hysteresis:	0.5 ppm (below alarm point)

### *User interface:*

LCD display:	2x16 alphanumeric display
Control:	4 button keypad

### *Input/Output:*

Current output:	0 – 20 mA or 4 – 20 mA for 0 – 30 ppm
Communications:	RS232 serial communication (separate adapter)
Alarm outputs:	2 x relays (0.25A)
Clean water solenoid valve output:	1 x relay (0.5A, supply voltage)
Switch input:	1 x switch input for separator status

### *Data storage and retrieval:*

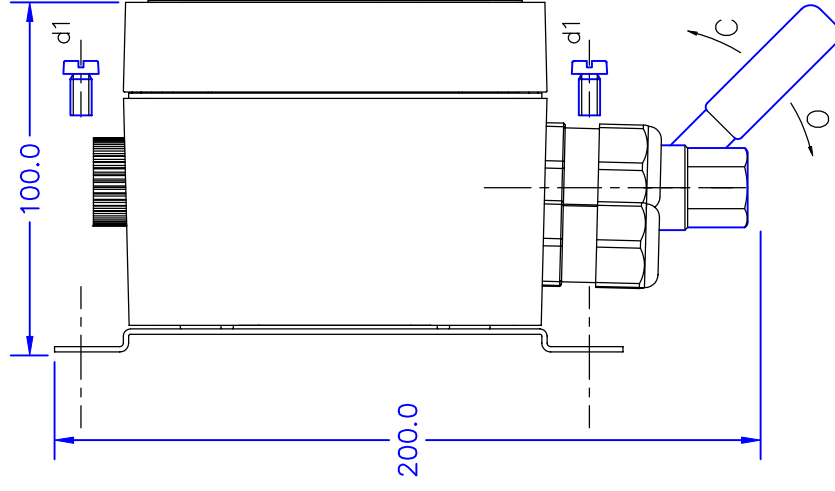
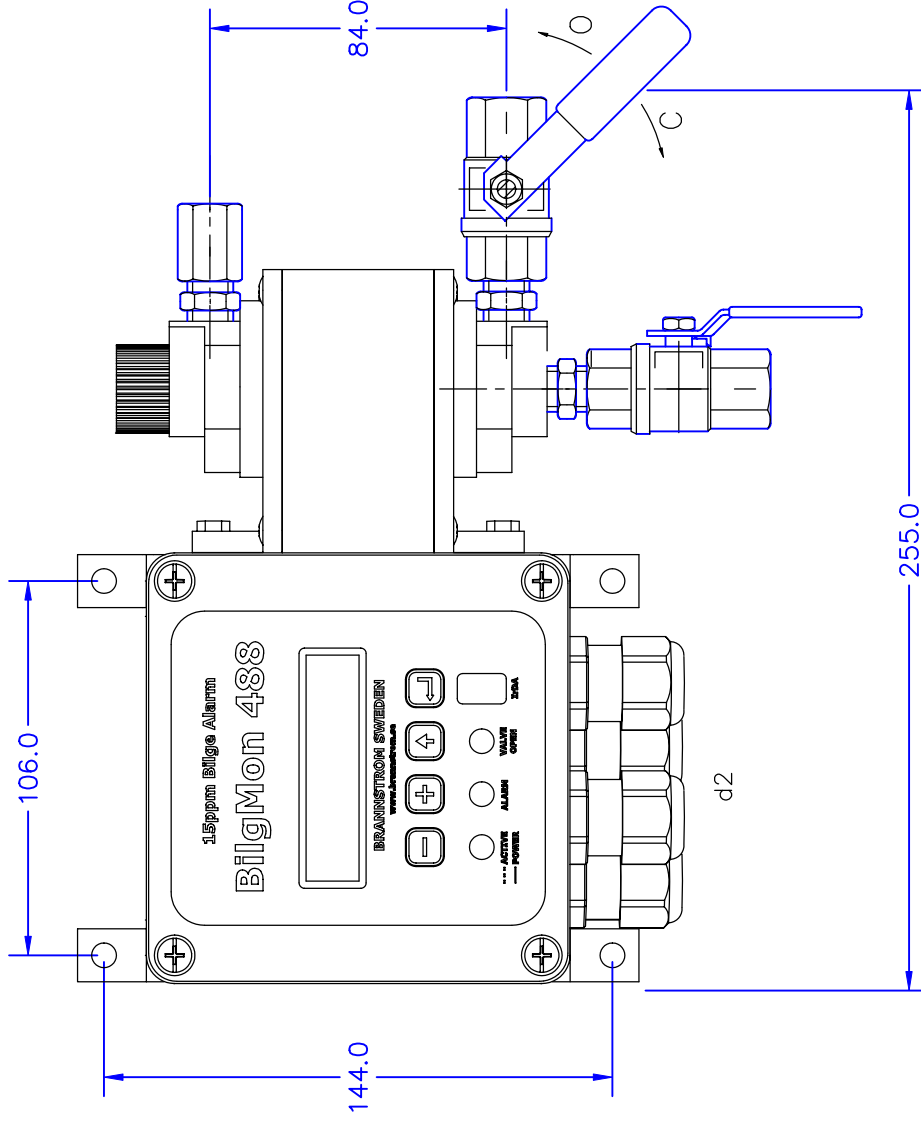
Calibration storage:	Stored in sensor housing.
IMO required data:	Stored in BilgMon488 main housing (sensor housing may be replaced with data remaining on board).
IMO required data retrieval:	Via LCD display, RS232 or removable memory.

### *System and supply:*

Supply:	1 A, 115 or 230 V AC, 50 – 60 Hz
Power consumption:	10 VA

Legend

Item	Qty	Name	type	dimension	Material
d1	4	M6x10			Steel
d2	4	M20 cable glands			Plastic
		Opening	ø	7-12mm	



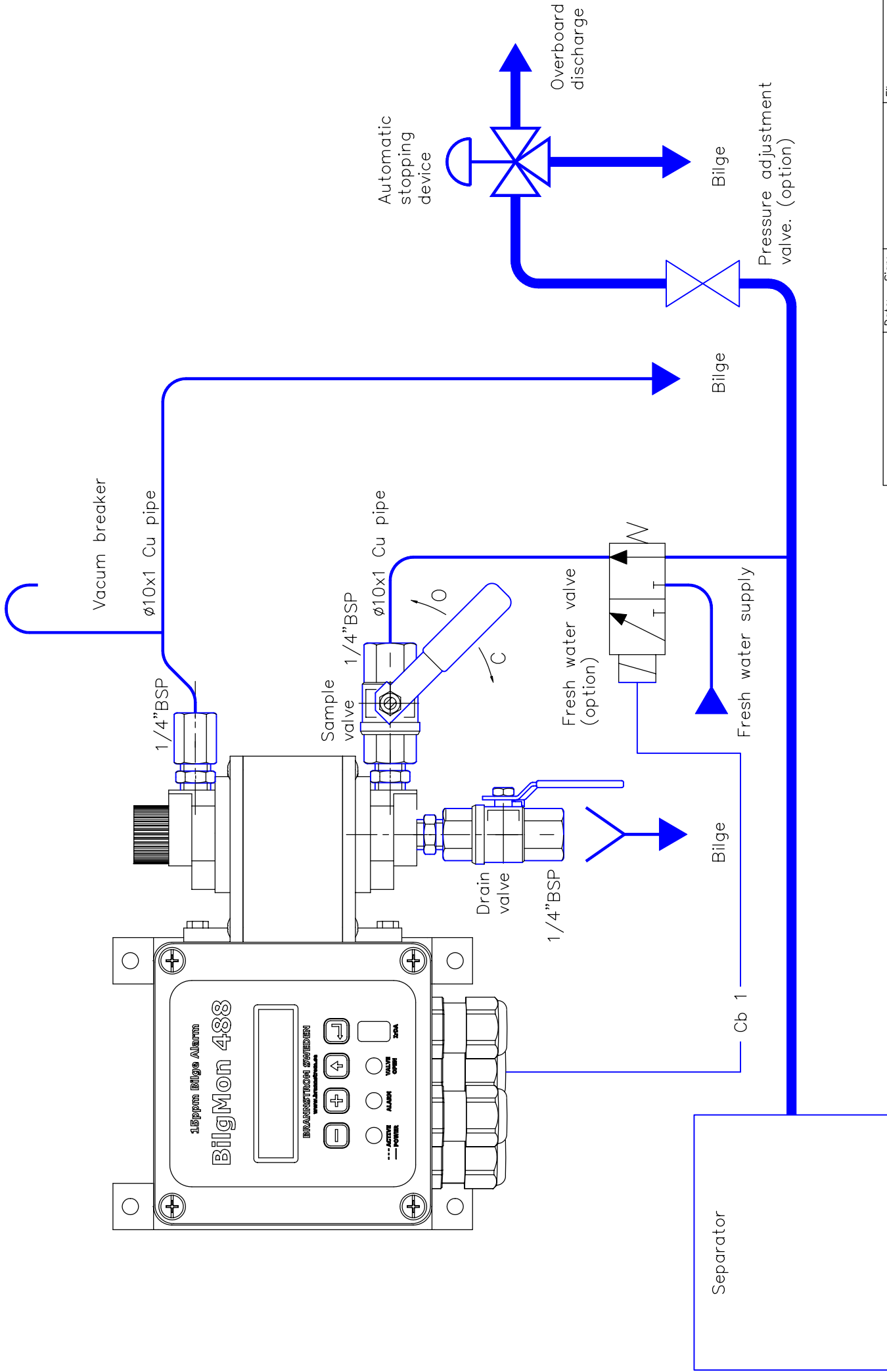
Copyright  
BRÄNNSTRÖMS  
ELEKTRONIK AB  
Uddevallegatan 14  
416 70  
GÖTEBORG  
Phone: (46) 31 195600  
Fax: (46) 31 197790

Date: 041118 RB  
041125 RB

Sign: Bilgmondim  
Page: 1 (1)  
RNR: BM Ver: B  
Drawing nr: BM041118.1

File: Bilgmondim  
Bilgmon 488  
Dimensions

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Copyright <b>BRÄNNSTRÖMS ELEKTRONIK AB</b> Uddevallevägen 14 416 70 GÖTEBORG Phone: (46) 31 195600 Fax: (46) 31 197790	Date: 050112 RB Sign: 050124 RB	Bilgmon 488 Tube arrangements	File: Bilgmontube Page: 1 (1) RNR: BM Ver: B Drawing nr: BM050113.1
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# DET NORSKE VERITAS

## EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2002/75/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

**CERTIFICATE NO. MED-B-3067**

This Certificate consists of 3 pages

*This is to certify that the product*

**Oil-content meters**

*with the type designation*

**15ppm Bilge Alarm, Type BilgMon 488**

*Manufactured by*

**Brännströms Elektronik AB**

**Göteborg, Sweden**

*is found to comply with the requirements in the following Regulations/Standards:*

Annex 1, Section 2, item No. A.1/2.3 and Annex B, Module B in the directive.  
MARPOL 73/78, as amended, Annex I, Regulation 16(2) & (5), IMO Res. MEPC.107(49)

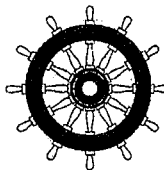
*Further details of the product and conditions for certification are given overleaf.*

*Place and date*

Høvik, 2005-05-13

for DET NORSKE VERITAS AS

for **Tore Morten Wetterhus**  
Manager, MTPNO370  
Department Systems & Components



Notified Body No. 0575

*This Certificate is valid until*

2010-05-13



**Tom Bjørn Hansen**  
Principal Surveyor

*DNV local office:*  
DNV Gothenburg

*EBK*



*Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.*

*The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.*

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.: MED-B-3067  
Case No.: EC-MP-43  
File No.: A.1/2.3

## Product description

The equipment is intended for installation onboard ships for bilge water monitoring/ alarm - max.15 ppm at discharge overboard

The 15ppm Bilge Alarm is designed and tested to meet the requirements of the IMO Resolution MEPC.107(49).

## Applications/Limitations

*The equipment is not permitted to be installed in spaces subject to explosion hazards.*

## Type Examination documentation

<i>Drw. No.</i>	<i>Date/ Rev.</i>	<i>Title;</i>
BM041118.1	041125/C	BilgMon 488, Dimensions
BM050113.1	050124/C	BilgMon 488, 3-way Solenoid Arr.mt.
BM050113.2	050124/C	BilgMon 488, NO Solenoid Arr.mt.
BM050113.3	050124/C	BilgMon 488, NO and NC Solenoid Arr.mt.
BM050113.2	050304/B	BilgMon 488, Electric Wire Arrangements
BM041213.1	041213/A	BilgMon 488, Test Arrangement

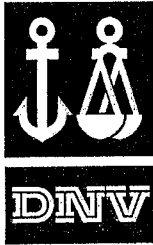
Instruction Manual BilgMon488 15 ppm Bilge Alarm

## Tests carried out

### *Test Reports:*

- Tested in accordance with the requirements of the specification contained in Part 2 of the Annex to the Guidelines and Specification contained in IMO Resolution MEPC.107(49), witnessed by DNV Malmø, *December 2004.*
- DNV Technical Report No.2005-3044, Rev.01 dated 2005-01-21, Environmental testing of 15 ppm Bilge Alarm BilgMon 488.






Cert. No.: MED-B-3067  
Case No.: EC-MP-43  
File No.: A.1/2.3

### Marking of product

For traceability to this EC Type-Examination, each unit to be marked with;

- Manufacturer's name and trade mark
- Type designation
- Serial No.
- Mark of Conformity

### Mark of conformity

The manufacturer is allowed to affix the Mark of Conformity  according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

- Module D: The quality system for production and testing shall be approved by the Notified Body.
- Module E: The quality system for inspection and testing shall be approved by the Notified Body.
- Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

END OF CERTIFICATE







# TYPENZULASSUNGSZEUGNIS

## für 15 ppm Bilge Alarm

Certificate of Type Approval for  
15 ppm Bilge Alarm

Ausgestellt im Namen der Regierung der  
**BUNDESREPUBLIK DEUTSCHLAND**  
durch die **SEE-BERUFGENOSSENSCHAFT**  
Issued under the authority  
of the Government of the **FEDERAL REPUBLIC OF GERMANY**  
by See-Berufsgenossenschaft

Hiermit wird bescheinigt, dass der 15 ppm Bilge Alarm, die nachstehend aufgeführten Anlageteile umfasst, einer Prüfung unterzogen und gemäß den Anforderungen der technischen Beschreibung, enthalten in Teil 2 der Anlage zur Empfehlung der IMO-Entscheidung MEPC.107(49), erprobt wurde.

This is to certify that the 15 ppm Bilge Alarm, comprising the equipment listed below, has been examined and tested in accordance with the requirements of the specifications contained in part 2 of the annex to the Guidelines and Specifications contained in IMO-Resolution MEPC.107(49).

Dieses Zeugnis ist nur für nachstehendes Ölgehaltsmessgerät gültig.  
This certificate is valid only for the 15 ppm Bilge Alarm referred to below.

15 ppm Bilge Alarm geliefert durch: Brännströms Elektronik AB, Uddevallagatan 14,41670 Gothenburg, Sweden  
15 ppm Bilge Alarm supplied by:

Typbezeichnung: BilgMon 488  
under type and model designation and incorporating:

Die Analyse-Einheit des 15 ppm Bilge Alarms wurde hergestellt durch: Brännströms Elektronik AB  
15 ppm Bilge Alarm analysing unit manufactured by:

Zusammenstellungszeichnung Nr.: BM041118.10 Datum: 25.11.2004  
to specification/assembly drawing No.: date:

Der elektronische Teil des 15 ppm Bilge Alarms wurde hergestellt durch: Brännströms Elektronik AB  
Electronic section of 15 ppm Bilge Alarm manufactured by:

Zusammenstellungszeichnung Nr.: BM041118.11 Datum: 25.11.2004  
to specification/assembly drawing No.: date:

Versorgungspumpe hergestellt durch: -  
Sample feed pump manufactured by:

Zusammenstellungszeichnung Nr.: - Datum: -  
to specification/assembly drawing No.: date:

Probenaufbereitungseinheit hergestellt durch: -  
Sample conditioning unit manufactured by:

Zusammenstellungszeichnung Nr.: - Datum: -  
to specification/assembly drawing No.: date:

Der 15 ppm Bilge Alarm ist für die Verwendung gemäß Regel 16(5) geeignet.  
The 15 ppm Bilge Alarm is acceptable for use in accordance with regulation 16(5).

Eine Kopie dieses Zeugnisses soll jederzeit auf jedem Schiff mitgeführt werden, das mit diesem 15 ppm Bilge Alarm ausgerüstet ist.  
A copy of this Certificate should be carried aboard a vessel fitted with this 15 ppm Bilge Alarm at all times.

Dieses Typenzulassungszeugnis bleibt über das nachstehende Datum hinaus in Kraft, sofern kein Widerruf erfolgt. Ein Widerruf für auf einem Schiff eingebaute Einrichtungen kann z.B. erfolgen, wenn diese nicht gefahren und/oder nicht gewartet und/oder nicht funktionsbereit sind und/oder nicht innerhalb einer angemessenen Frist an zukünftige Bestimmungen angepasst werden können.

This certificate of type approval is in force beyond the below mentioned date unless it is revoked.  
A revocation of the equipment installed aboard the ship can follow, but is not limited to, if the equipment is not maintained and/or is not in good working order and/or the equipment can not be modified within an appropriate time frame, due to future regulatory standards.

Daten und Ergebnisse der Erprobungen siehe Anhang.  
Test data and results attached as Appendix.

Dieses Typenzulassungszeugnis ist gültig bis: 28.02.2010  
This certificate of type approval is valid until:

Ausgestellt in Hamburg am: 01.03.2005  
Issued at Hamburg on:

Zulassungs-Nr.: 320 029  
Certificate-No.:



SEE-BERUFGENOSSENSCHAFT  
- SCHIFFSSICHERHEITABTEILUNG -

*A. B. Seifert*

Unterschrift  
Signature