



Marine & Offshore

Certificate number: 10225/E0 BV

File number: AP 3314

Product code: 3741H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.
ISTANBUL - TURKEY

for the type of product

LEVEL TRANSMITTERS

LEVEL CONTROL DEVICE - Types: C-4, AU-18, AU-20, AU-21, AU-22 & EG-11.

Requirements:

BV Rules for the Classification of Steel Ships.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 05 Oct 2025

For Bureau Veritas Marine & Offshore,

At BV ISTANBUL, on 05 Oct 2020,

Gurcan Yilmaz



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 Marine & Offshore. 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 & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Product model or type designation:

C-4, AU-18, AU-20, AU-21, AU-22 & EG-11.

Product description:

AU21 is intended to engine room, bilge well, pump room, bilge well alarms.

AU22 & EG-11 are intended to engine room tanks, peak tanks, cargo area high level, cargo area high level alarms.

Magnetic level switches with following specifications:

Type	AU-18	AU-20	AU-21	AU-22	EG-11
Dia. mm	8	12	12	16	16
Drawing no	704.950.000.155 704.950.000.156 704.950.000.157 704.950.000.158	704.950.000.110 704.950.000.111 704.950.000.112 704.950.000.113	704.950.000.005	704.400.000.035 704.400.000.040 704.400.000.041	704.300.000.025 704.300.000.027 704.300.000.028
Working Condition	Normal open	Normal open / change over	Change over	Normal open / change over	Normal open
Switch no	1	1	1-2	1-4	prp
Float No	1	1	1-2	1-4	1
Electricity	Max. 1 A, 24 V	Max. 1 A, 24 V	Max. 1 A, 24 V	Max. 1 A, 24 V	Max. 1 A, 24 V
Tamb.	-10/+125	-10/+125	-10/+125	-10/+125	-10/+100
Ex Approval	II 1/2 G Ex ma IIA T6 GA/Gb	II 1/2 G Ex ma IIA T6 GA/Gb	II 1/2 G Ex ma IIA T6 GA/Gb	II 1/2 G Ex ma/db IIA T6 GA/Gb	II 1/2 G Ex ma/db IIA T6 GA/Gb

Type	C-4	AU - EG
Mounting	Side	Vertical
Wetside Material	Stainless Steel AISI 304 (except float: AISI 316L)	Stainless Steel AISI 304
Temperature Range	up to 150° C	-10°C to 125°C
Maximum Working Pressure for wetside parts	16 Bar	16 Bar
Switch Voltage Max	125VDC / 480VAC	400VAC/DC
Switching Capacity	0.5A (VDC) - 15A (VAC)	N.O.: 3.0 A Change Over: 1.0 A

2. DOCUMENTS AND DRAWINGS:

According to documents and drawings filed in AP 3314, including:

Drawing No: 7040003 for C-4 and No 704.300.000.015 for AU-EG, the letter dated 23.11.2007.

AYVAZ :

- Fact Sheet "Au-EG" (2 pages, undated and unreferenced).
- Double relays control panel using instruction, dated Mar 2011
- EG11-2R control panel montage instruction, dated Mar 2014
- Manufacturer declaration letter, dated 2015.01.30

IEP ATEX :

- Ex certificate No. IEP 14 ATEX 0222, dated .2014-05-28
- Ex certificate No. IEP 14 ATEX 0223, dated .2014-05-28

3. TEST REPORTS:

- Test Report No. A030142-CLE1&2, issued by the Laboratoire National d'Essais (LNE) on 06th June 2000.
- Test Report No. TL1310, issued by Mariner Systems (UK) Ltd. on 31 March 2009.

4. APPLICATION / LIMITATION:

4.1 - BV Rules for the Classification of Steel Ships.

4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.

4.3 - Magnetic Level Switches Type C-4 may not be used for oil and liquid fuel tanks on board passenger ships where penetration below tank top would be necessary.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** has declared to Bureau Veritas the following production site(s):

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.
ATATURK SAN. BOLGESI
MUSTAFA INAN CAD. NO:36
HADIMKOY, 34860 ISTANBUL
TURKEY

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 - It is **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 10225/D0 BV issued on 28 Sep 2015 by the Society.

*** END OF CERTIFICATE ***



Marine & Offshore

Certificate number: 06628/F0 BV

File number: ACM 141/0110/001

Product code: 3718H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.
ISTANBUL - TURKEY

for the type of product

LEVEL GAUGE - MAGNETIC TYPE

Type MG-33 and MG-33 S

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 31 Aug 2026

For Bureau Veritas Marine & Offshore,

At BV ISTANBUL, on 31 Aug 2021,

Gurcan Yilmaz



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 Marine & Offshore. 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 & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Magnetic Level Indicators Type MG-33 and MG-33 S

1.1 Design Specifications

- a vertical chamber
- a float
- two side connections
- an indicating scale with plastic/aluminium rollers containing magnets

1.2 Rating

	MG-33	MG-33S
Design pressure (bar)	16	10
Design temperature (°C)	180	160
ATEX Rating*	II 1/2 G Ex h IIC T6 Ga/Gb	II 1/2 G Ex h IIC T6 Ga/Gb

*Application for use in hazardous areas are to be approved in each case (cf.§4.5).

1.3 Material specification

Chamber	AISI 304/316
Float	AISI 316
Side connections	AISI 304/316
Indicating scale	Plastic/Aluminium

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Technical data dated July 2016
- Drawing MG-33 S (small) DN 15 PN 16 dated 07/04/2005
- Drawing MG-33 S (small) DN 20 PN 16 dated 07/04/2005
- EU-Type Examination Certificate N° IEP ATEX 0213 dated 28/12/2018

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Test report N° 12.0421.2.95 dated 28/06/1995 of MPA NRW in Dortmund, Germany

4. APPLICATION / LIMITATION

- 4.1 - Level gauges are to be used for tanks intended for water, oil fuel and other flammable oils according to requirements Pt C, Ch 1, Sec 10 [2.9.2] of Bureau Veritas Rules.
- 4.2 - In passenger ships, the level gauges are not admitted for oil fuel and other flammable oils where penetration below tank top would be necessary and their failure or overfilling of the tanks is not to permit release of fuel into the space.
- 4.3 - In cargo ships, their failure or overfilling of the tanks is not to permit release of fuel into the space.
- 4.4 - The fitting of the level gauges is to be in accordance with the manufacturer's instructions as well as the Rules and Regulations applicable to the ship.
- 4.5 - Ex-certification is not covered by this certificate. Application for use in hazardous areas to be approved in each case
- 4.6 - The level gauges are to be installed and tested to the Surveyor's satisfaction.
- 4.7 - Each level gauge is to be supplied with its manuals for installation, use and maintenance.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 - The products are to be supplied by **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** has declared to Bureau Veritas the following production site:

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.
Atatürk Organize Sanayi Bölgesi
Hadýmköy Mah. Mustafa Ýnan Cad.
No: 44 Arnavutköy,
Istanbul
Turkey

6. MARKING OF PRODUCT

The product shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Operational data

7. OTHERS

It is **HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.** 's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 06628/E0 BV issued by the Society.

*** END OF CERTIFICATE ***



Marine & Offshore

Certificate number: SMS.W.II./3247/E.0

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RECOGNITION FOR BV MODE II SCHEME

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S.
ISTANBUL - TURKEY

Summary of the range of the recognition which is detailed in the subsequent page(s):

- Design & Production of ;
-Expansion Joints
-Level Gauges and Devices
-Flexible Metal Hoses

This certificate is issued to attest that Bureau Veritas Marine & Offshore has performed, at the above company's request and in compliance with the requirements of NR320, a satisfactory assessment of the manufacturing facilities and associated quality procedures related to the range of the recognition.

This certificate will expire on: 03 Jun 2024

For BUREAU VERITAS,
At BV ISTANBUL, on 03 Jun 2020,
Gurcan Yilmaz



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. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore 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 electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfRecognition.jsp?id=2vravohdin>

BV Mod. Ad.E 697 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF RECOGNITION

1. RANGE OF THE RECOGNITION

The products listed in the table below are to be certified individually or per batch by Bureau Veritas Marine & Offshore in compliance with the applicable requirements (IBV products as defined in NR320).

App. number	Validity date	Item designation	Trade name
13480/D0 BV	13 Jun 2024	METALLIC EXPANSION JOINTS / BELLOWS - 2101I	AYVAZ Axial Expansion Joints PN 2,5 to PN 16 DN 25 to DN 1200
13913/D0 BV	20 Apr 2025	METALLIC EXPANSION JOINTS / BELLOWS - 2101I	AYVAZ Axial Expansion Joints with fixed and floating flanges PN6, PN10, PN16
15889/B1 BV	15 Oct 2020	METALLIC EXPANSION JOINTS / BELLOWS - 2101I	AYVAZ Axial/Lateral Expansion Joints with fixed flanges PN10/ PN16 - DN 80 to DN 400
55826/A0 BV	19 Feb 2024	METALLIC EXPANSION JOINTS / BELLOWS - 2101I	MKTY-30
59150/A0 BV	20 Apr 2025	METALLIC HOSES (FLEXIBLE PIPES) ASSEMBLIES - 2103I	Corrugated Stainless Steel Hoses

The products listed in the table below are not required to be certified individually or per batch by Bureau Veritas Marine & Offshore. Their compliance with the approved type is solely certified by the manufacturer using its own format of document and marking to allow traceability to the approved type (HBV products as defined in NR320).

App. number	Validity date	Item designation	Trade name
06628/E0 BV	01 Aug 2021	LEVEL GAUGES / INDICATORS - 3714H	Type MG-33 and MG-33 S
10225/D0 BV	28 Sep 2020	LEVEL TRANSMITTERS - 3741H	LEVEL CONTROL DEVICE - Types: C-4, AU-18, AU-20, AU-21, AU-22 & EG-11.

2. LIMITATIONS

The certificates listed in the range of recognition are to be valid, as applicable.

Bureau Veritas Marine & Offshore is to be informed immediately of any modification to manufacturing facilities and associated quality procedures in order to agree on appropriate actions.

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S. has to apply for the periodical audits as agreed with Bureau Veritas Marine & Offshore.

3. PERIMETER OF CERTIFICATION

Quality system of following site(s) has been assessed:

HACI AYVAZ END. MAMULLER SAN. VE TIC. A.S. - ISTANBUL - TURKEY

4. REMARKS

Arrangements shall be made for a Society's Surveyor to attend the tests and examinations at the manufacturer's works in order to issue the Bureau Veritas certification for the approved type (IBV Products) to be fitted on board ships classed with Bureau Veritas.

*** END OF CERTIFICATE ***