



Marine & Offshore
Division

Certificate number: 23721/B0 BV

File number: AP4191

Product code: 3840H

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

NIVELCO Process Control Co.

Budapest - HUNGARY

for the type of product

LEVEL SWITCH

Magnetic float level switch

NIVOMAG: MK-200 series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31

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 mentioned above.

This certificate is a renewal of certificate N° 23721/A0 BV expiring on 05/04/2016

This certificate will expire on: 05 Apr 2021

For BUREAU VERITAS,

At BV HAMBURG, on 26 Feb 2016,

Dirk Hoepfner



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 & Offshore Division 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 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:

NIVOMAG: MK-200 series are magnetic float level switches for level detection of liquids.

Main characteristics:

Switch action: One micro-switch with NO and NC
 Switching capacity: 250V AC 10A; 220V DC 0,6A;
 Degree of protection: IP65 (outside of tank)
 IP68 20m (for immersed type, MKU, MKV, MKZ)

Variants:

Level Switch Type: **MK a - 2 b c - d** (according to technical description dated 25 June, 2010)

a= Version: A, G, S, U, V, Z

b= Function: 1, 2, 3

c= Process connection: 0, 1, 2, 3, 4, 5, 6, 7, 8, B, N

d= Arm length: 0, 1, 2, 3, 4; for MK_-23: 1, 2, 3

2. DOCUMENTS AND DRAWINGS:

- Technical description dated 25 June, 2010; Technical data sheet: mk20s02a0607b; MKA-210-1M-000-00 dated 2010.06.28

3. TEST REPORTS:

HUNGARIAN INSTITUTE FOR TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT:

- 221-051-07408 dated 31.01.1995

EMI-TÜV SÜD Kft.:

- R-228976-2 dated 2011.03.09.

4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships.

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

4.3 - Bureau Veritas Environmental Category, **EC Code: 31**.

4.4 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **NIVELCO Process Control Co.** 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.

5.3 - **NIVELCO Process Control Co.** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

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1043 Budapest
HUNGARY

5.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT:

- Maker's name or trademark.

- Equipment type or model identification.

- Date of manufacture and/or serial number.

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 units at any time and that **NIVELCO Process Control Co. - HUNGARY**, will accept full responsibility for informing shipbuilders, ship owners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 23721/A0 BV issued on 05 Apr 2011 by the Society.

*** END OF CERTIFICATE ***