

MARINE DIVISION17 bis Place des Reflets - La Défense 2
92400 Courbevoie - FranceTel. 33 1 42 91 52 91
Fax, 33 1 42 91 28 94
www.veristar.com

Certificate number: 09414/B0 BV

File number : AP 2982

Product code : 3752H

*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***SEPAC (Société d'Exploitation des Procédés Alain Cota)**

PARIS - FRANCE

*for the type of product***GM METERS**

GM-METER TEST

Regulations and standards :

SOLAS 74 as amended, Regulations II-1/22.1 and 2, Regulation II-1/8.7.4 - IEC 60945, IEC 60529.

*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 : 21 Nov 2011**

At Paris la Défense, on : 21 Nov 2006

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV SAINT-OUEN L'AUMONE

Surveyor : J. Letellier



J. BENOIT



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 :

The **GM-METER TEST** is a portable device to measure inclining angles during inclining test of new-buildings vessels and vessels already in operation.

It is particular well-suited for use at shipyards by shipbuilders and shipwrights, and experts who carry out inspections on board vessels.

The **GM-METER TEST** consists of three units:

- An electronic sensor in a box
- A control unit comprising a laptop with backup battery
- An interface link set (USB port)

Power supply:

Laptop: ship power supply 220V AC 50/60 Hz.
Sensor: 5V/100 mA via 2m USB cable.

Index of Protection = IP 44.

2. DOCUMENTS AND DRAWINGS :

As per documents filed in the Society under number AP 2982 .

3. TEST REPORTS :

Test reports N^os:

8110272/1 dated December 1998 issued by LNE
8110272 dated December 1998 issued by LNE
8050840 dated December 1998 issued by LNE.
P06 123 dated 17/Jul./2006 issued by AEMC Mesures.

4. APPLICATION / LIMITATION :

The **GM-METER TEST** allows to measure the angles of inclination of the ship during a stability experiment with a precision of 0.01 degrees, when the following conditions are satisfied:

- 4.1 - Cannot be used in bridge zone.
- 4.2 - The Laptop is to be compliant with IEC 60945 for conducted and radiated emissions.
- 4.3 - Solar radiations exposures should be avoided.
- 4.4 - The operation of the device shall be carried out by qualified personnel, used to perform stability experiments, such as specialised departments of yards or owners, or accredited experts.
- 4.5 - Recalibration and general inspection should be carried out at a metrological department on a periodic basis of 2 years at normal use, or following exposure to harsh conditions and sensor battery replacement, or when the tests controlling the reliable function of the device, provided for in the users' manual and carried out by the user, are not satisfactory.

5. PRODUCTION SURVEY REQUIREMENTS :

On special request, arrangements should be made for a Society's Surveyor to inspect at the Manufacturer's works, equipment of the type referred to in this certificate.

6. MARKING OF PRODUCT :

- Trade name
- Date of manufacture and serial number.
- Equipment type or model identification under which it was type-tested.
- $\sqrt{\quad}$ or \diamond Society's brand / and if a special survey is required, certificate of inspection N^o at works.
- Date of next recalibration / inspection.

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 unit at any time and that **S E P A C, Paris - France**, will accept full responsibility for informing shipbuilders, shipowners 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° 09414/A0 BV issued on 17/11/1999 by the Society.

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