

INTERMODAL MATERIÉL
AND
NAUTICAL/NUCLEAR ANALYSIS
IMANNA
LABORATORY INC.

CERTIFICATION TEST REPORT

515 Gus Hipp Blvd.
Rockledge, Florida 32955
Telephone (321) 632-2008
http://www.imanna.com

Post Office Box 560933
Rockledge, Florida 32956-0933
FAX (321) 690-3360
e-mail: info@imanna.com

CERTIFICATION TEST REPORT
20150-2
ACCESS HATCH TESTS
OF
TOP LINE 460X525MM HATCH
TO
ISO 12216 REQUIREMENTS
FOR
LALIZAS HELLAS

CUSTOMER:

LALIZAS ITALIA S.R.L (Nuova Rade Brand)
VIA FONTANELLE 22, 16012 BUSALLA (GE) ITALY

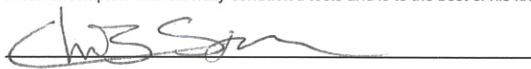
MANUFACTURER
OF TEST ARTICLE: LALIZAS ITALIA S.R.L (Nuova Rade Brand)
BUSALLA (GE) ITALY

REPORT NO.: 20150-2
IMANNA JOB NO.: 20150
CUSTOMER P.O. NO.: Letter
CONTRACT: N/A
PAGES IN REPORT: 5

DATE: January 10, 2019

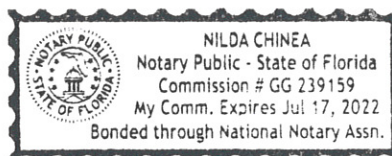
STATE OF FLORIDA

CHRIS STORM, being duly sworn, deposes and says: The information contained in this report is the result of complete and carefully conducted tests and is to the best of his knowledge true and correct in all respects.



SUBSCRIBED and sworn to before me this 10th day of January, 2019





IMANNA shall have no liability for damages of any kind to person or property, including special or consequential damages resulting from IMANNA's providing the service covered by the report.

IMANNA LABORATORY, Inc.
TEST BY
ROBERT WHITE
PROJ. MANAGER

1. TEST ARTICLE

A representative sample of a “Top Line” 460X525mm hinged hatch cover was received for test from LALIZAS ITALIA S.R.L (Nuova Rade Brand) VIA FONTANELLE 22, 16012 BUSALLA (GE) ITALY. The hatch is designed for use in Area II as defined by ISO 12216.



view of tested hatch

2. PART NUMBER

“Top Line 460X525mm”

3. REQUIREMENTS

The requirements for this effort were to perform the tests necessary to determine conformance of the hatch to the requirements specified by ISO 12216, in accordance with the procedures specified within the same standard. Additionally the Structural Strength Test specified in ABYC H-3 was conducted on the sample.

4. PROCEDURE

The hatch was placed in a fixture simulating the normal installation on a boat in Area II. The hatch was then subjected to the:

- a.) unintentional stepping test
- b.) water tightness test - pressure
- c.) rope jamming test
- d.) hatch and hinge strength test
- e.) water tightness test – spray
- f.) structural strength test

5. RESULTS

5.1 UNINTENTIONAL STEPPING TEST

The hinged hatch was subjected to the unintentional stepping load of 750N at various points on the outside edge of the hatch. No damage or permanent deformation was

observed to the hatch, framing, or hinge following the loading. The loading was applied in accordance with figure 3 of ISO 12216. This result successfully meets the requirements set forth by ISO 12216.

5.2 WATER TIGHTNESS TEST - PRESSURE

The hatch was installed in a pressure jig and subjected to a water pressure of 14 kPa. No ingress of water was observed during the test at a pressure of 14 kPa. This result successfully meets the requirement of having no leaks set forth by ISO 12216 for prefabricated appliances designed for use in Area II.

5.3 ROPE JAMMING TEST

A 14mm three ply polypropylene rope was placed at the point specified in ISO 12216. The hatch was then subjected to a load of 750 N as shown in figure 4 of ISO 12216. No permanent damage to the hatch, framing, or hinge was observed following the loading. This result successfully meets the requirements set forth by ISO 12216.

5.4 HATCH AND HINGE STRENGTH TEST

The hinged hatch was placed in a fixture and opened to 90°. A twisting torque was induced on the hatch by two parallel and opposite forces of 200 N as shown in figure 5 of ISO 12216. No permanent deformation or damage to the hatch, framing, or hinge was observed following the test. This result successfully meets the requirements set forth by ISO 12216.

5.5 WATER TIGHTNESS TEST – SPRAY

The hatch was installed in a test jig and subjected to a spray of water,

- a. from a water jet nozzle positioned at 45°*
- b. at a rate of 2.6 gal./min. (10L/min)*
- c. with the spray aimed everywhere within 2" (0.05m) of each side of the periphery of the hatch*
- d. for a period of three minutes*

No ingress of water was observed during the three minute test. The hatch assembly meets the spray test requirements.

5.6 STRUCTURAL STRENGTH TEST

A 1½" thick rubber pad that measured 4" in diameter was placed in the center of the hatch installed in a matching test fixture, and loaded with 300 pounds (the larger amount of the two loading conditions stated in the standard). The load was applied for a continuous period of one minute before removing the load and operating the hatch

assembly. The hatch was opened and closed several times to verify operation of the assembly following the high loading condition.

Following the loading test, the assembly was subjected to the water tightness spray test described in Section 9 of this report. No leakage was observed during the 3-minute exposure period. There were no signs of cracking or adverse effects to the assembly during or following the load and watertightness tests.

6. OBSERVATIONS AND COMMENTS

The results presented herein apply only to the test articles as prepared and as tested. This hatch successfully meets all the requirements mentioned above as set forth by ISO 12216.

All equipment used in the performance of these tests was calibrated to standards traceable to the N.I.S.T and/or verified at the time of the test using internationally recognized methods to validate the accuracy and repeatability of the values recorded or collected during the tests.

INSTRUMENTATION EQUIPMENT SHEET

Date: Feb. 2015

Job No.: 20150

Customer: LALIZAS ITALIA S.R.L
(Nuova Rade Brand)

Technician: Bell/ Lowe

Test Area: Dynamic Test Area

Test Item Description: hatch

INSTRUMENT	MFG	MODEL	RANGE	ACCURACY	CAL DATE	CAL DUE
Pressure Gauge	OMEGA Engineering	PGT-45L-30	0 to 30 PSIG	+/- 0.25 %	9-7-14	9-7-15
Weighing scale	O'Haus	Ranger	0 to 70 Kgm	±0.1 gram	each usage	each usage
Load Cell	Transducer Techniques	SWO-3K S/N:254886	0 to 3000 lbs	±0.02%	each usage	each usage
Load Cell	Transducer Techniques	SWO-3K S/N:276793	0 to 3000 lbs	±0.02%	each usage	each usage
Electronic Digital Flow Meter	GPI	KF 586 S/N:3901006	5 – 50 GPM	±1.5%	each usage	each usage

Instrumentation Information Verified by: 