

Certificate of Testing

Nº: TRA021534CC01A

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Marine Rescue Technologies Ltd
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HU17 1JG

Issue Date: 27th May 2014
Our Ref: TRA-021534-00
Client's Order Number: PO 01417
Date of Tests: 6th and 7th May 2014

Attn.: Jon Gething

Specimen(s):

1 Off
Software Version: sMRT V100
Serial Number: MOA-30000
TRaC Stores Number: E13500671
Receipt Date: TRA-021534-S1
01/05/2014

1 Off
Software Version: sMRT V100
Serial Number: MOA-30000
TRaC Stores Number: E13500531
Receipt Date: TRA-021534-S2
07/05/2014

Specification:

Testing was carried out in accordance with BS EN 60529:1992 and TRaC Global Limited quotation TRA-021534-00 dated 23rd April 2014.

IP6X - Dust Tight

Testing in accordance with BS EN 60529:1992.

Test Duration: 80 Volumes of the specimen, or 8 hours; whichever is achieved first.

Vacuum: $\leq -20\text{mbar}$

Test Engineer



P. Bullock Test Technician

Approval

D. K. Morris Chief Test Engineer

Certified that the specimens detailed hereon have been subjected to the tests as required by the order unless otherwise stated above. Our technical competence and quality control arrangements are in accordance with the conditions of our UKAS accreditation. No representation or warranty is given that the Tests performed under the terms of Contract constitute, in themselves, a sufficient programme for the Customer's purpose, nor that the Customer's Equipment is suitable for any particular purpose. The contents of this Certificate shall not be reproduced, except in full, without the written approval of TRaC Global Limited.

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Specification (cont.):

IPX7 – Temporary Immersion in Water

Water Level: 1 metre above lowest point of enclosure
Duration: 30 minutes
Configuration: Non-Operational.

Procedure:

IP6X - Dust Tight

The specimen TRA-021534-S1 was found to have no openings that could be penetrated by the access probe of 1 mm ø.

The specimen was connected to a vacuum pump, pressure indicator and flow meter to calculate the test duration. The specimen was mounted in the dust chamber and re-connected to the vacuum pump to provide a gauge vacuum to laboratory ambient pressure during the test. The test was carried out in accordance with the specification for a period of 4.66 hours, the vacuum and flow stabilised at 0.04 l/min at -3mbar, Figure 1.

IPX7 – Temporary Immersion in Water

The temperature of the specimen TRA-021534-S2 and the water temperature were checked to ensure the differential was within 5°C. The specimen was secured in its normal working orientation and then immersed in laboratory ambient temperature tap water, Figure 2, to a depth of 1.0m to the lowest surface of the specimen, for a period of 30 minutes.

Results:

IP6X - Dust Tight

After testing the specimen was cleaned externally before being opened for internal inspection. No dust ingress was found.

IPX7 – Temporary Immersion in Water

After testing, the specimen was removed from the water, Figure 3, and dried externally before being opened for internal inspection. No water ingress was found. An example of an inspection is shown in Figure 4.

The specimen TRA-021534-S1 therefore satisfies the requirements of BS EN 60529: 1992 IP6X.

The specimen TRA-021534-S2 therefore satisfies the requirements of BS EN 60529: 1992 IPX7.

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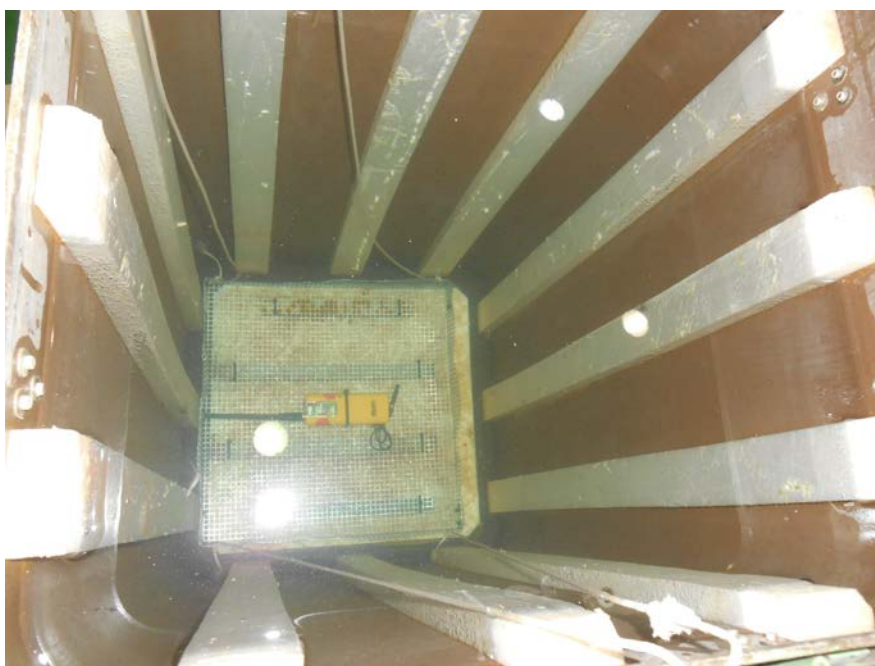
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SPECIMEN TRA-021534-S1 AFTER UNDERGOING IP6X DUST TEST

FIGURE 1



SPECIMEN TRA-021534-S2 SECURED TO A WEIGHTED FRAME FOR IPX7 IMMERSION

FIGURE 2

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SPECIMEN TRA-021534-S2 REMOVED FROM WATER FOR INSPECTION

FIGURE 3



SPECIMEN TRA-021534-S2 INSPECTED FOR WATER INGRESS

FIGURE 4