



Test Certificate
on Cold Test
of t100W Antenna Systems
prepared for Intellian Technologies Inc.



- Note: 1. The results contained herein apply only to the particular specimens tested and to the specific tests carried out, as detailed in this test report.
2. Only the original report is guaranteed.
3. No extract, abridgement or abstraction from this test report can be used to institute legal proceedings and to advertise.



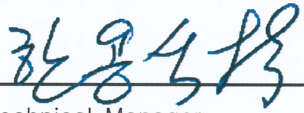


**KOREA INSTITUTE OF
MACHINERY & MATERIALS**

156, Gajeongbuk-Ro, Yuseong-Gu, Daejeon, 305-343, KOREA
TEL : 82-42-868-7323 FAX : 82-42-868-7355

Test Certificate

 KOREA INSTITUTE OF MACHINERY & MATERIALS	Page(2) / Total Pages(7)	
---	------------------------------	--

1	Name of Test	Cold test	
2	Name and Address of Client	18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri)	
3	Name and Address of Maker	Intellian Technologies Inc.	
4	Test Specimen	1) Name	t100W Antenna systems
		2) Model	t100W
5	Test Method	IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold	
6	Test Date	From Jan. 19, 2015 to Jan. 20, 2015	
7	Test Environment	Temp. 20 ± 2℃ / Hum. 50 ± 5 % RH	
8	Test Results	 The test results complied with the applicant requirements.	
9	Report No.	KIMM-15-0049-1	
10	Use of Report	Russian Maritime Register of Shipping	
11	Remarks		
12	Tested and Reported by :		Reviewed and Approved by :
	 Test Engineer Lee, Yu-whan		 Technical Manager Han, Yong-shik

2015 .01. 26.

Korea Institute of Machinery & Materials



Test Results

1. Test Equipment

Facility	Model	Calibration date
Walk in Climatic Chamber	UC10-7090 (Italy)	Jan. 15, 2015

2. Test Procedure

- Prior to the test, the test specimen is to be visually inspected and mechanically checked and has been subject to functional tests at normal ambient conditions in accordance with the relevant test program.
- The rate of change of temperature within the chamber shall not exceed 1°C per minute from the normal temperature to $-62 \pm 3^{\circ}\text{C}$.
- Maintaining $-62 \pm 3^{\circ}\text{C}$ is needed for the environment conditions for 16 hours.
- The end of this period, functional tests shall be performed at the test temperature.
- After the functional tests, the chamber temperature is to be rising up to the normal temperature at the rate of 1°C per minute.
- After the test, relevant tests are to be carried out on the test specimen.
- The test program in accordance with the temperature condition is shown in Fig.1.

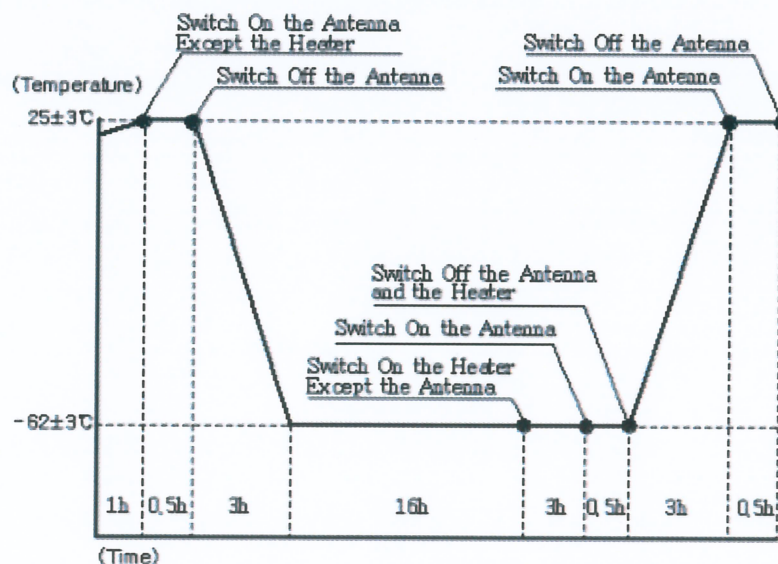


Fig. 1. Test conditions

3. Test set-up

- The test shall be carried out on the test specimen in normal operation configuration including mounting and supports with all mechanical arrangement.

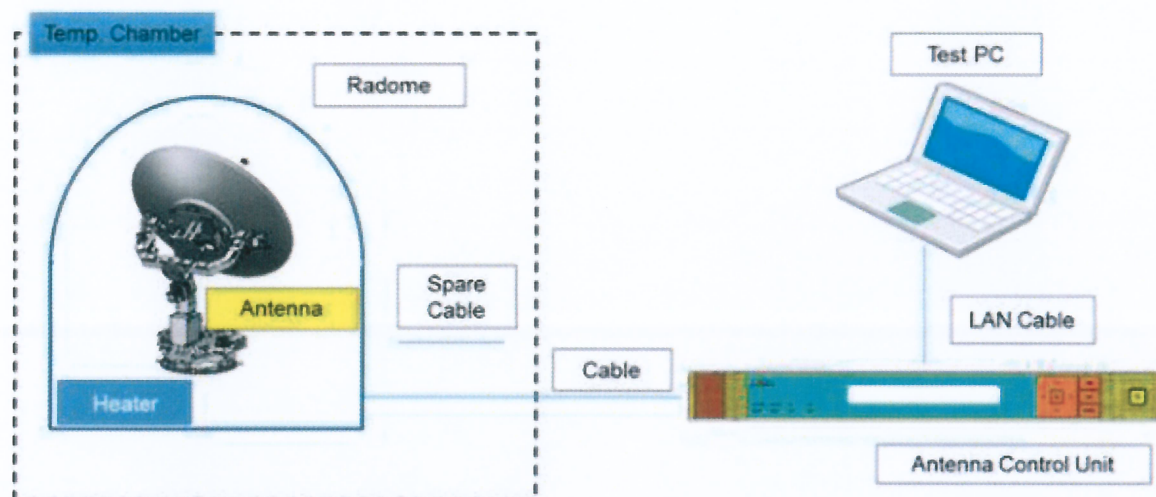


Fig. 2. Test diagram

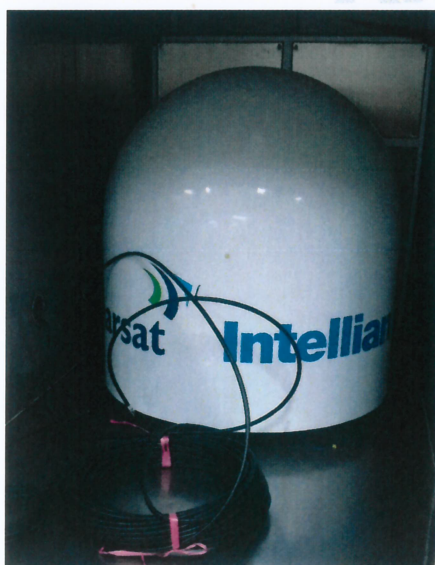


Photo 1. Test specimen set-up in the chamber



Photo 2. Set-up of ACU (Antenna Control Unit)

4. Test results

- The test is deemed to have been passed if the specified functions are demonstrated and no damage to the test specimen is detected.

4.1 Visual Inspection

Inspection Items	Specification	Result	
		Before Test	After Test
Visual Inspection	The visual inspection is to be carried out on the test specimen.	Conformity	Conformity

4.2 Functional Test

Inspection Items	Specification		Results		
			Before Test	During Test	After Test
Functional Test	Check the operation of the test specimen	Antenna	Conformity	–	Conformity
		ACU display	Conformity	Conformity	Conformity

Note.

- This functional test has been tested according to applicant requirements.
- ACU display (SEARCH1) means operation of the antenna.



(Switch on the antenna)

Photo 3. Functional Test during the test(ACU display)

5. Attachment (t100W)



Fig. 3. t100W Antenna Systems

6. Raw Data

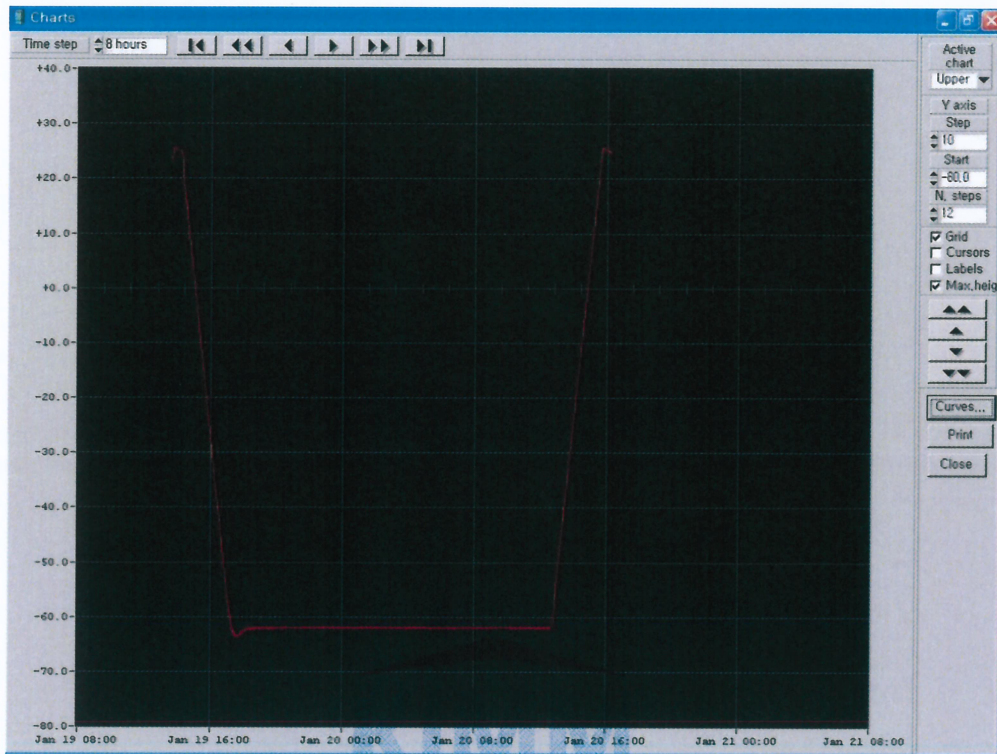


Photo 4. Result curve for the temperature condition