environ LABORATORIES

Letter of Certification

Icing/Freezing Rain Test

Prepared for:	**Test dates**	
FT Technologies Ltd	**Start:**	5/19/2011
	Completion:	5/19/2011
Attention: Mr. Olivier Hus	**Environ test number:**	**42874-1 Rev. 1**
	Purchase order number:	**P17723**
	Purchase date:	4/5/2011

Environ Laboratories LLC certifies that one Wind Sensor was subjected to an Icing/Freezing Rain Test as specified in *FT Technologies Ltd Technical Specification Drg. No. A9310*, Issue 3, dated April 1, 2011, which references *MIL-STD-810G*, dated October 31, 2008, Method 521.3, Section 4.5.2, Procedure—Ice Accretion, as requested in FT Technologies Ltd purchase order P17723, dated April 5, 2011.

Manufacturer	FT Technologies Ltd
Device	One (1) Wind Sensor
Model/part number	FT702LT V22
Serial number	2870-875

The results of this test apply only to the units identified in this Engineering Report by device identifier and model / part number, or serial number.

The test unit was mounted to a pipe and held vertically for testing. The blower utilized for testing was turned on and verified to produce a wind speed of 15 m/s. The test unit was first subjected to the De-Icing Test by placing the test unit in a temperature chamber stabilized at -14°C. The water spray was started and continued for 57 minutes until 45 millimeters of ice had built up on the test unit. The wind and water were turned off and the test unit heater was turned on. After 15 minutes there was no ice on the test unit. The chamber was returned to ambient conditions. The test unit was next subjected to the Anti-icing Test by placing a 1-inch metal bar in the test area to verify ice build up. The wind and water were turned on, the chamber was stabilized at -14°C, and the spray continued for 38 minutes until 37 millimeters of ice had built up on the test bar. The sensor area and main body were verified to be ice free and the chamber was returned to ambient conditions. Visual examination of the test unit upon completion of the exposure revealed no evidence of damage or degradation. All operation of the test unit and test monitoring were performed by an FT Technologies Ltd representative. The test unit was returned to FT Technologies Ltd.

Ian R. Campbell, Test Engineer

David M. Gillen, Vice President

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Instrumentation

All instrumentation is calibrated regularly by instruments directly traceable to the National Institute of Standards and Technology, and in accordance with *MIL-I-45208A, ANSI/NCSL Z540.3-2006,* and *ISO/IEC 17025: 2005*.

Equipment Number	Description	Manufacturer	Model Number	Last Calibration	Due Calibration	Range
200-268	Controller / Programmer	Thermotron	WS-960	12/3/2010	12/3/2011	-125º to +350ºF
210-063	Digital Multimeter	Fluke	79 III	5/9/2011	5/9/2012	0 to 40 Vcd, 0 to 10A
380-557	DC Power Supply	Sorensen	DCS 60-18E	N/A	N/A	0 to 60 Vcd; 0 to 18A
400-044	Stopwatch	Extech Instruments	365510	5/6/2011	5/6/2012	0 to 23 hrs 59 mins 59 sec
500-067	Temperature Chamber	Thermotron	WS-950-CH-50C-30SS	N/A	N/A	-73º to +177ºC
765-004	Vane Thermo-Anemometer Datalogger	Extech	451126	4/15/2011	4/15/2012	0.3 to 45 m/s
770-050	Dial Caliper	Mitutoyo	505-626-50	1/10/2011	1/10/2012	0 to 6 inches
950-027	Hydra Data Bucket	Fluke	2620A	5/6/2011	5/6/2012	Type T: -270°C to +400°C