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## TESTS UNDERTAKEN AND REPORT PREPARED BY SIRA TEST & CERTIFICATION LIMITED (ST&C)

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Date: July 2004

**IRISS Infrared Window Assemblies**

**Global Maintenance Technologies Ltd**

**Report No: N51D12071A**

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## TEST REPORT

ISSUED BY SIRA TEST & CERTIFICATION LIMITED

Carried out by ST&C on behalf of:

Global Maintenance Technologies Ltd  
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Project No: 51D12071

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### 1 INTRODUCTION

This report refers to the performance of the test samples when tested against the agreed programme. It does not imply that any other samples or products necessarily comply with the requirements of the test programme. In addition, whilst this report maybe freely reproduced as a complete document it may not be abstracted.

<b>Manufacturer:</b>	Global Maintenance Technologies Ltd
<b>Type Identification:</b>	IRISS Infrared Window Assemblies
<b>Standard:</b>	BS EN 60529:1992
<b>Deviations from Standard:</b>	None
<b>Aim:</b>	Window Assembly IP 65 Lattice Assembly IP 2X
<b>ST&amp;C Test Procedure:</b>	LOP 220
<b>ST&amp;C Internal Test Reports:</b>	04/0310 & 04/0372
<b>Sample Delivery Date:</b>	17 June 2004
<b>Tests Conducted Between:</b>	17 June 2004 – 14 July 2004

## 2 DESCRIPTION OF TEST SAMPLES



**Figure 1 – Photograph of a Window Assembly**



**Figure 2 – Photograph of a Lattice Assembly**

## 3 TESTS FOR FIRST CHARACTERISTIC NUMERAL

### 3.1 Tests for first characteristic numeral: 6

#### 3.1.1 Test for protection against access to hazardous parts

Reference BS EN 60529:1992 clause 12.

A rigid test wire  $\varnothing$  1 mm and length to a stop face of 100 mm was pushed against all openings of the Lens Assembly with a force of  $1 \text{ N} \pm 10\%$ .

The test wire did not come into contact with any hazardous parts.

#### 3.1.2 Test for protection against solid foreign objects

Reference BS EN 60529:1992 clause 13.

The Window Assembly was supported in its normal operating orientation inside a chamber containing 2 kg of test dust with maximum particle size  $75 \mu\text{m}$  maintained in suspension. As the normal working cycle of the test sample may cause a reduction in its internal air pressure below that of the surrounding atmosphere (which was not verified by Sira Test & Certification Ltd) connection was made to a vacuum pump to maintain an under-pressure inside the test sample which did not exceed 20 mbar.

The extraction rate was less than 40 volumes per hour, therefore the test duration was 8 hours.

On internal inspection of the test sample no dust was found.

### 3.2 Tests for first characteristic numeral: 2

### **3.2.1 Test for protection against access to hazardous parts**

Reference BS EN 60529:1992 clause 12.

A jointed test finger  $\varnothing$  12 mm and length to a stop face of 80 mm was pushed against all openings of the Lattice Assembly with a force of 10 N  $\pm$  10%.

The test finger stop face did not pass through any opening nor did the test finger come into contact with any hazardous parts.

### **3.2.2 Test for protection against solid foreign objects**

Reference BS EN 60529:1992 clause 13.

A rigid test sphere  $\varnothing$  12 mm was pushed against all openings of the Lattice Assembly with a force of 30 N  $\pm$  10%.

The test sphere did not completely pass through any opening.

## **4 TEST FOR SECOND CHARACTERISTIC NUMERAL**

### **4.1 Test for protection against water**

Reference BS EN 60529:1992 clause 14.

The Window Assembly was supported in its normal operating orientation. Water from a standard water jet hose test nozzle with internal  $\varnothing$  12.5 mm was directed at the test sample from all practicable directions at a rate of 100 L/min from a distance between 2.5 to 3 metres. The test duration was 3 minutes.

On internal inspection of the test sample no water was found.

## **5 CONCLUSION**

The Window and Lattice Assemblies described in sections 1 and 2, when tested in the manner described in sections 3 and 4, satisfied the requirements of BS EN 60529:1992 Amendments Nos. 1 and 2, for the ingress protection codes:

Window Assembly IP 65

Lattice Assmebly IP 2X