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## **SPECIMEN**

## **TEST REPORT**

**No. RSK XXXX**

**Enclosure Integrity Test  
MHS Homes Group  
Leviathan Way  
Chatham  
Kent ME4 4LL**

**Date of Test: 15th December 2008**

**Date of Issue: 19th December 2008**

## 1 Introduction

A room integrity test was carried out on the argon-protected first floor comms room at the MHS Homes Group premises in Leviathan Way, Chatham. This was undertaken as part of a regular maintenance programme in accordance with BS:ISO 14520, which requires an annual check of the integrity of rooms protected by gaseous fire extinguishing systems.

The test was conducted in accordance with the general requirements of NFPA 2001 / BS:ISO Standard 14520 (2000) by Peter Lake for Resikom Ltd on behalf of Multifire.

## 2 Results

The results are calculated using descending interface methodology as it is understood that there is no recirculation after system discharge. Under these conditions extinguishant is lost via leakage through low level apertures to be replaced by fresh air entering at high level, thus creating a descending interface. The retention time is the time it takes for the interface to reach the highest item requiring protection.

As the air handling provisions for the room were reported to be solely recirculatory, it was unnecessary to close down any dampers or fans for the test.

The test readings showed that the enclosure had an equivalent leakage area of 820 cm<sup>2</sup>. Assuming a worst-case leakage path distribution, the predicted retention time is **10.8 minutes** at a risk height of 2.3m (cabinet above the slab floor). This satisfies the ten-minute retention time required by the Standard.

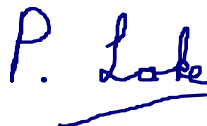
Full details of the input data, results and floor plan of the enclosure are appended.

## 3 Conclusions

The enclosure is sufficiently leak-tight to retain the extinguishant for the necessary time-period. No further action is therefore necessary at the present time. However, in light of the marginal nature of the result, particular care should be exercised to ensure that no additional leakage is introduced, for example when installing further cabling.

To ensure the continuing efficiency of the extinguishing system, it is essential that annual enclosure integrity testing be included as part of routine system maintenance, commencing **December 2009**, as is required by BS:ISO Standard 14520 (2000). Failure to do so may jeopardise system effectiveness.

Authorised for Issue:  
19th December 2008

A handwritten signature in blue ink that reads "P. Lake".

Dr. P J Lake  
For Resikom Ltd

## ROOM INTEGRITY TEST RESULTS

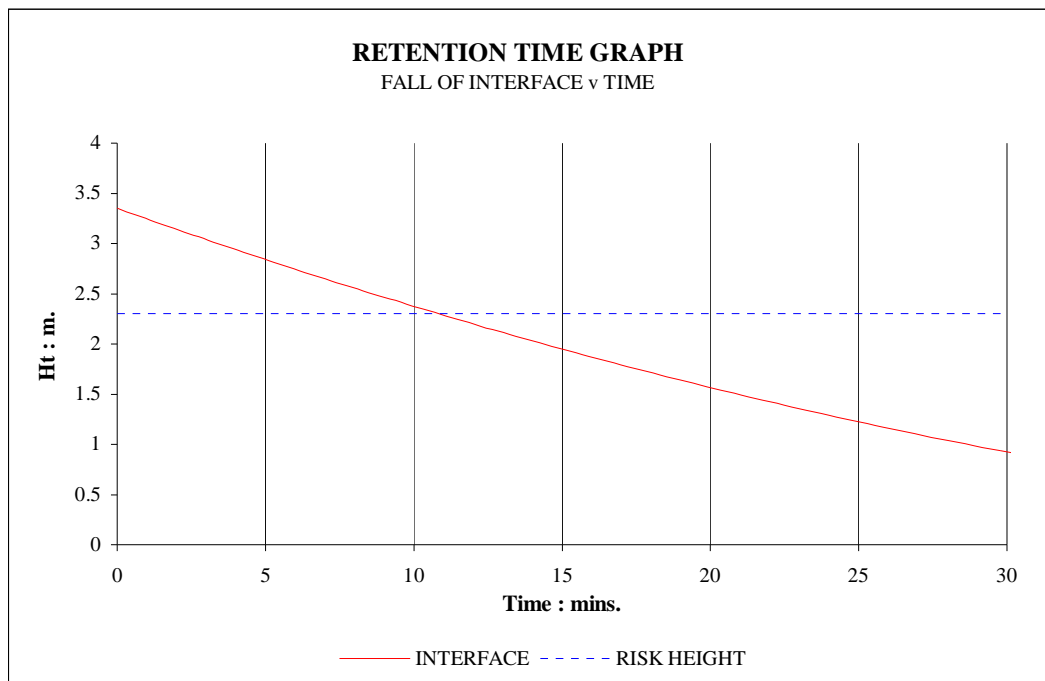
### FIRST FLOOR COMMS ROOM MHS HOMES GROUP LEVIATHAN WAY, CHATHAM

#### PROJECT DETAILS

Client MHS Homes Group  
Date 15th December 2008  
Site Leviathan Way, Chatham  
Room First Floor Comms Room

#### RESULTS

Equivalent Leakage Area (cm<sup>2</sup>) 820  
**Retention Time at Risk Height (mins) 10.8**



#### ROOM & SYSTEM DETAILS

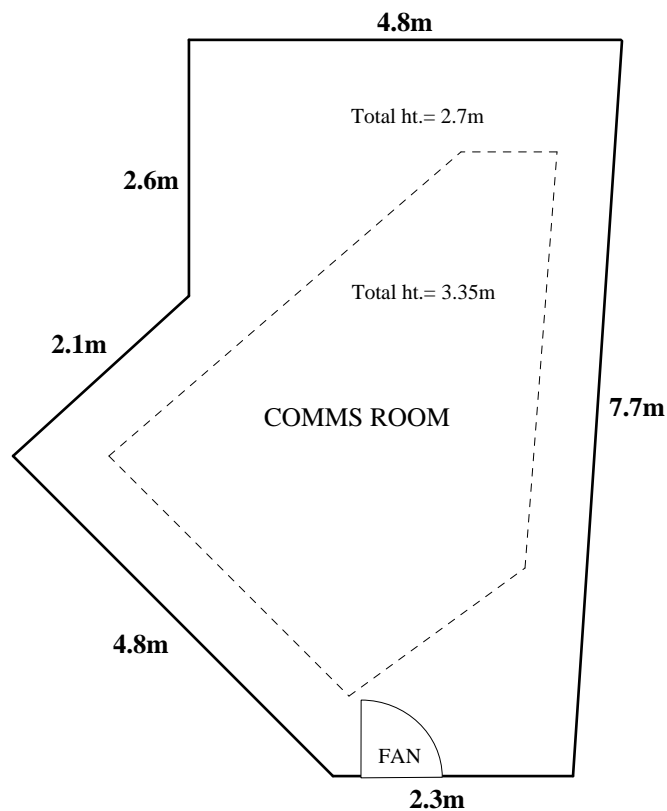
Floor Area (sq m)	32.7
Overall Height (m)	3.35
Gross Volume (cu m)	109.5
Risk Height (m)	2.3
Bias Pressure (Pa)	0
Room Temp. (deg c)	20
Argon Supply (kg)	113.2
Design Conc. (%)	46.3
Column Pressure (Pa)	7
Lower Leakage Fraction	0.5

#### TEST DETAILS

Test Number	1
<u>Pressurisation</u>	
Room Pressure (Pa)	10
Total Flow (l/s)	234
<u>Depressurisation</u>	
Room Pressure (Pa)	10
Total Flow (l/s)	174

**PLAN VIEW OF  
FIRST FLOOR COMMS ROOM  
MHS HOMES GROUP  
LEVIATHAN WAY, CHATHAM**

**ENCLOSURE INTEGRITY TEST ON 15/12/08  
(DRAWING NOT TO SCALE)**



Room volume	=	109.5 m <sup>3</sup>
Maximum room height	=	3.35 m (inc. f/void)
Effective floor area	=	32.7 m <sup>2</sup> (vol/ht)
Risk height	=	2.3 m (cabinet)
Argon supply	=	113.2 kg