Fire Resistance Test in Accordance with IMO Resolution A754 (18) on a 'B' Class Partition Assembly

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Report	Name	Signature*
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Approved	C. Johnson	

* For and on behalf of Warrington Fire Research Centre

Report Issued : 24th July 2003

Fire Resistance Test in Accordance with IMO Resolution A754 (18) on a 'B' Class Partition Assembly

Summary

A fire resistance test in accordance with the requirements of the International Maritime Organisation (IMO) Resolution A754 (18) has been performed on a single specimen of a 'B' Class partition assembly.

The assembly had nominal overall dimensions of 2500 mm high by 3000 mm wide by 80 mm thick. The assembly comprised 3 steel skinned, mineral fibre cored partition panels whose vertical edges were profiled such that they interlocked. The panels were fitted into mild steel channels at the head, base and both vertical edges. In all cases, the supporting channels were fixed back to the concrete lining of the test frame via steel screws into plastic plugs at nominally 500 mm centres. The specimen incorporated two different joints running the height of the specimen. One Male-Female joint and a Pilaster joint.

The performance of the specimen was judged against the performance criteria for integrity and insulation as specified in IMO Resolution A754(18). The results obtained were as follows:

Integrity : 62 minutes
Insulation : 29 minutes

The test was discontinued after a period of 62 minutes.

Partition assemblies as described in this report, may be regarded as 'B-15' Class according to IMO Resolution A754 (18) if all the materials of construction (except adhesives) are non-combustible.

Approval of the construction may be obtained only on application to the appropriate Administration.

Date of Test : 16th April 2003

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FOREWORD

The present Annex was drawn up within the framework of the General Conditions of Service applicable to Bureau Veritas interventions at the initial request of THRISLINGTON GULF in Abu Dhabi (U.A.E.)

The technical comments and the conclusions thus expressed may have to be re-considered in light of any modifications or alterations that would invalidate the data shown in the documents which are referred to therein.

These comments and conclusions would become null and void should Bureau Veritas not be kept informed of such modifications or alterations with specific reference to the present Annex to the Certificate of Design Appraisal N° ADH.40C2.236/DC1 dated 10/08/02.

INTRODUCTION

Bureau Veritas have carried out the design review of the main components of the Cleanrooms that are listed hereafter:

- Truss Frame and its posts
- Connection piece of adjacent roof panels
- Wall panel and connection to roof

The strength and deflection of each roof panel (6m x 0.8m) under concentrated load was not reviewed as subject to dedicated test.

DESIGN CRITERIA

The hereafter criteria were given by THRISLINGTON GULF as the basis for Bureau Veritas' review:

- Roof panel is 6m x 0.8m x 0.080m (LxWxH)
- Wall panel is 3m x 1.2m x 0.080m (HxWxD)
- Each roof panel is designed to withstand concentrated load of 150kg (corresponding to 2 persons)
- The self weight of roof panel (6m x 0.8m) is conservatively taken as 30 kg/m^2
- The truss is designed for a maximum span between posts of 14m loaded to withstand the self weight of as many roof panels to accommodate to the span and a 150kg concentrated load anywhere on the panels.

STANDARD

The calculated stress values were compared to the allowable stresses given by the Manual of Steel Construction, AISC-ASD 9th Edition.

CONCLUSIONS

The Design of the main components was checked according to the aforementioned Design Criteria, based on the appraised drawings and was found to be in compliance to the above Standard.

The list of reviewed drawings with their appraisal status is given below:

Roof panel & Truss Detail No 1458/1 rev. 0 dated 03.08.02	Approved
Roof panel & Truss Detail No 1458 rev. C dated 07.08.02	Approved

BUREAU VERITAS Surveyors at Abu Dhabi PARIS 1828 INTERNATIONAL REGISTER