

Report Number **BTC 11099S**

A STRUCTURAL TEST REPORT TO BS5234: PART 2:
1992, ANNEXE E ON GYPROC STAGGERED STUD
PARTITION, 3.6m HIGH.

Test Date: 6th June 2000.

Customer: British Gypsum Limited
East Leake
Loughborough
Leicestershire
LE12 6HX

Customer: **British Gypsum Limited**

BTC 11099S: Page 1 of 9



No. 0296
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TABLE OF CONTENTS

FOREWORD	3
REPORT AUTHORISATION	3
TEST CONSTRUCTION	4
TEST MATERIALS	4
Gyproc SoundBloc	4
Metal components	4
Fixings	5
TEST SEQUENCE AND PROCEDURES	5
TEST RESULTS	5
TEST CONDITIONS	5
LIMITATIONS	6
TEST DATA	7
BS5234: PART 2: 1992, ANNEX E: STRUCTURAL DAMAGE BY LARGE SOFT BODY IMPACT ON GYPROC STAGGERED STUD PARTITION, 3.6m HIGH.	7
APPENDIX A - CRITERIA FOR ACCEPTANCE	9

FOREWORD

This test report details a structural test to BS5234 : Part 2 on a Gyproc staggered stud partition, 3.6m high.

The test specimen was installed by British Gypsum Limited. The construction of the specimens took place between the 31st May and 2nd June 2000. The Building Test Centre played no role in the design or selection of the materials comprising the test specimens.

REPORT AUTHORISATION

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TEST CONSTRUCTION

The partition specimen was erected in a straight run 1800mm long x 3600mm high with two free ends.

72C50 channel was screw fixed at 300mm centres to the head and base of the test rig using 36mm Gyproc Duraline screws. 70S50 stud was fixed at one end using 36mm Gyproc Duraline screws. At the other end a 70S50 stud was inserted and left free standing. 60I70 channel was located between the head and base tracks at 600mm centres, offset by 300mm, and held in place by SC1 Spacer clips.

An inner layer of 12.5mm Gyproc SoundBloc was screw fixed at 300mm centres around the perimeter of the board using 25mm Gyproc Drywall S point screws. The outer layer of 12.5mm Gyproc SoundBloc was screw fixed at 300mm centres around the perimeter and within the field of the boards using 36mm Gyproc Drywall S point screws.

The descriptions of individual components making up the test specimen were provided by the customer and were checked for accuracy wherever possible.

TEST MATERIALS

Gyproc SoundBloc

Nominally, 2400mm (long) x 1200mm (wide) x 12.5mm (thick) Gyproc SoundBloc manufactured by British Gypsum Limited ex Kirkby Thore works.

Actual surface density :	10.4 kg/m ²
Board identification :	27-126-0 15:18:47.
Nominal moisture content :	<1%

The surface density was calculated using the actual weight and size of the boards used for the test specimens. The moisture content of plasterboard has been established from measurements made over many tests using samples dried to constant weight in an oven at 40°C.

Metal components

- i) 70S50, average weight per metre 548 g/m.
- ii) 72C50, average weight per metre 471 g/m.
- iii) 60I70, average weight per metre 1144 g/m.

Customer: **British Gypsum Limited**

LIMITATIONS

The results only relate to the behaviour of the element of construction under the particular conditions of test; they are not intended to be the sole criteria for assessing the potential structural performance of the element in use.

The specification and interpretation of structural test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

TEST DATA

BS5234: PART 2: 1992, ANNEX E: STRUCTURAL DAMAGE BY LARGE SOFT BODY IMPACT ON GYPROC STAGGERED STUD PARTITION, 3.6m HIGH.

Test Code: 11099a, Severe on stud
11099b, Severe between studs

Test Date: 6th June 2000

Impact positions: See Figure 1.

Conditions: Temperature = 15.7 – 19.0°C.
Humidity = 55.7 – 78.4%

TEST DATA		
Impact No.	Impact Energy Nm	Damage
11099a	120	No visible damage with any impact.
11099b	120	No visible damage with any impact.

For details of test rig see Figure 2.

Test Procedure: 5234/2/ANNE issue No.2. Further details available from The Building Test Centre.

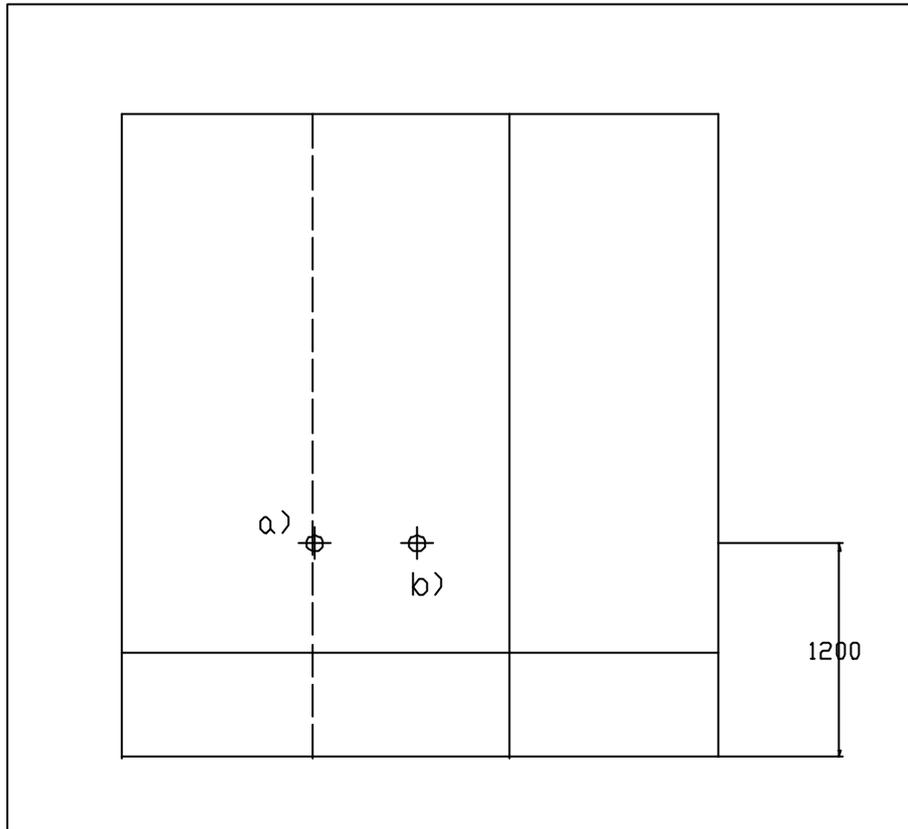


Figure 1. Soft body impact positions – a) on stud, b) between studs

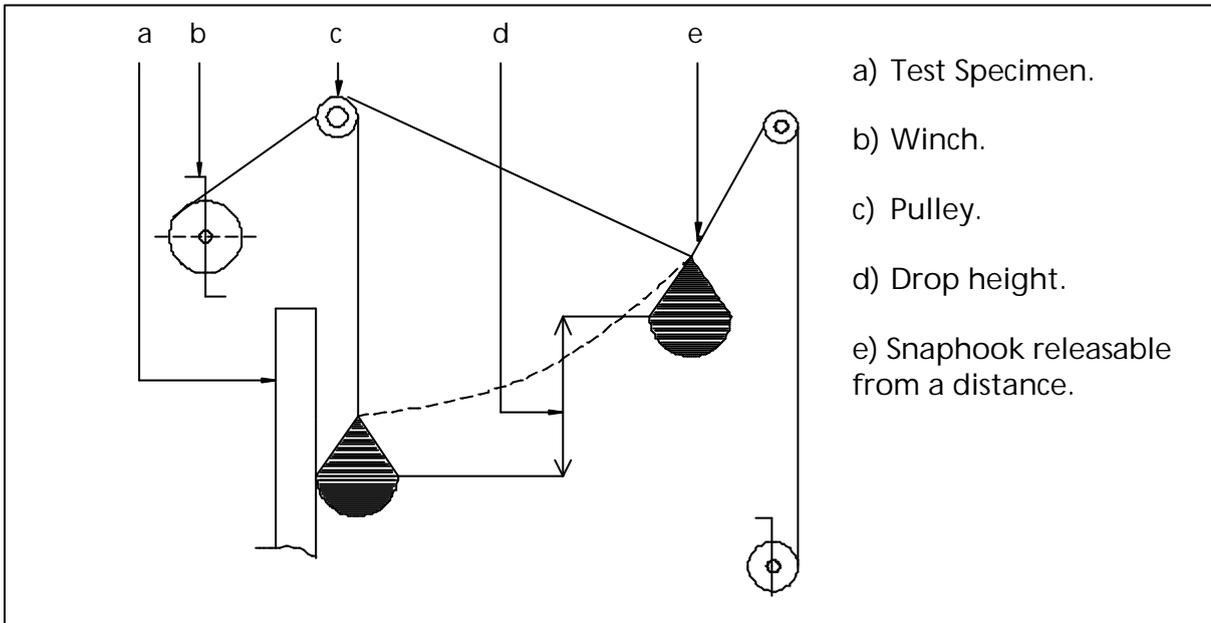


Figure 2. Test apparatus for soft body impact tests

APPENDIX A - CRITERIA FOR ACCEPTANCE

Annex E. Resistance to structural damage by impact from a large soft body.

Capable of withstanding the impact energies without collapsing or dislocating the partition or its fixings.

Note. For partitions that do not collapse and where the damage is not dangerous, any deflection and any damage reported in the test report is for information only.