LLOYDS BRITISH

TEST REPORT 186492/1

SUBMITTED BY: RDT CHAMBER SOLUTIONS LTD
A DIVISION OF MITRAS COMPOSITES UK LTD.

DATE OF TEST: 15/03/2010

TEST NUMBER: 186492

PRODUCT DESCRIPTION

RapidSTACK Highway Chamber System

INTRODUCTION:

The customer submitted a 1300 X 850 X 600mm deep Chamber, manufactured from Sheet Moulding Compound, grade reference HUP 16/30 RB 7035, and bolted together on the corners via M10 washers nuts and bolts. A top location plate 50mm thick x 1500mm x 1000mm was fitted to replicate a cover.
The Chamber was submitted for test in accordance with BS EN 124:1994.

METHOD:

The Chamber System was placed in a compressive test rig with hydraulic actuator calibrated within machine LL220C, Calibrated in accordance with ISO 7500-1:2004 E Part 1.
A 250 mm diameter test block was centrally located on the Chamber.
In accordance with the standard a load of26.66 tonnes was applied 5 times.
The design load of 40.0 tonnes was applied and held for 30 seconds.

RESULTS:

DESIGN LOAD 40 KN
PASS

THE CHAMBER SYSTEM PASSED THE D400 REQUIREMENTS OF BS EN 124

Lloyds British Testing Ltd Established 1812

Checked by S.P.Fox ..... Test and Inspection manager

LLOYDS BRITISH TESTING LTD, ALBION ROAD, WEST BROMWICH, WEST MIDLANDS B70 8AX
TEL: 0870 609 9140 FAX: 0870 609 9141
E.MAIL: WESTBROMWICH@LLOYDSBRITISH.COM WWW.LLOYDSBRITISH.COM
VAT NO. 729 2136 35 REG NO. 4444099

LLOYDS BRITISH, LLOYDS BRITISH GROUP, LLOYDS BRITISH TRAINING SERVICES, LLOYDS RUMNEY, LLOYDS HANDLING SERVICES, LLOYDS SOMERS, LLOYDS ROTA HANDLING AND COUBRO & SCRUTTON, TRADING UNDER LLOYDS BRITISH TESTING LTD

TEST REPORT NO 582303137

SUBMITTED BY: Mitras Composites (UK) Ltd. RDT Chamber Solutions Ltd

DATE OF TEST: 1st December 2005

REPORT NO: 582303137

PRODUCT: Composite Chamber Sections

INTRODUCTION: A 600 x 600 x 300mm deep chamber comprising of 2 x 150mm deep x 75mm wide sections manufactured from MEN 30 Sheet Moulding Compound and held together in the four corners with M10 steel bolts, nuts and washers was submitted for a compression test to achieve a load of 40 tonnes (D400).

METHOD: The sections were placed in a Compressive Test machine LL220C Calibrated in accordance with ISO 7500 –1 1999 E part one. A supplied test cover, manufactured from 30mm thick steel plate and measuring 935 x 735mm square, was fitted on top of the sample. A load of 26.6 tonnes was applied and held for 30 sec. No deflection was recorded. A final load of 40 tonnes was then applied and held for 30 seconds. No deflection was recorded.

The chamber was then taken above test requirement. The test was suspended when the chamber achieved 49 tonnes.

RESULTS: The Chamber passed the requirements of 40 tonnes (D400) loadings.

Lloyds British Testing Plc EST 1812 SPF

S P Fox
Test Manager

LLOYDS BRITISH TESTING plc, ALBION ROAD, WEST BROMWICH, WEST MIDLANDS B70 8BB TEL: 0121 569 1200 FAX: 0121 569 1299 E-MAIL: WEST.BROMWICH@LLOYDSBRITISH.COM WWW.LLOYDSBRITISH.COM

TEST REPORT NO. 582303285

SUBMITTED BY: Mitras Composites (UK) Ltd. RDT Chamber Solutions Ltd

DATE OF TEST: 19th December 2005

REPORT NO: 582303285

PRODUCT: Composite Chamber

INTRODUCTION: A600 X 600 X 300mm deep chamber comprising of 2 x 150mm deep x 75mm wide sections manufactured from MC 300 Dough Moulding Compound and held together in the four corners with M10 steel bolts, nuts and washers was submitted for a compression test to achieve a load of 25 tonnes.

METHOD: The sections were placed in a Compressive Test machine LL220C Calibrated in accordance with ISO 7500-1 1999 E Part One. A supplied test cover, manufactured from 30mm thick steel plate and measuring 735 x 735mm square, was fitted on top of the sample. A load of 16.6 tonnes was applied and held for 30 sec. No deflection was recorded. A final load of 25 tonnes was then applied and held for 30 seconds. No deflection was recorded.

The chamber was then taken above test requirement. The test was suspended when the chamber achieved 27.5 tonnes.

RESULTS: The Chamber passed the requirements of 25 tonnes (C250) loadings.

Lloyds British Testing Plc EST 1812 SPF 1

S P Fox
Test Manager

LLOYDS BRITISH TESTING plc, ALBION ROAD, WEST BROMWICH, WEST MIDLANDS B70 8BB TEL: 0121 569 1200 FAX: 0121 569 1299 E-MAIL: WESTBROMWICH@LLOYDSBRITISH.COM WWW.LLOYDSBRITISH.COM

TEST REPORT NUMBER 58230/SR1

Customer: MITRAS

Date of test: 14/09/05

Item under test: 1 number MC 100 chamber

Test type: Compression load test in accordance with BS EN124

Lloyds number: 58230/SR1

Test procedure: The sample was placed into a calibrated compressive testing machine calibrated in accordance with ISO 7500:1 1999E part 1 .A supplied test cover was then fitted on top of the sample complete with a 250m/m dia test block centralised to the chamber under test. A load was then applied gradually and without shock through the centre of the chamber until a load of 83.3Kn was achieved, (2/3 of the design load) and then a load of 125Kn (design load). The sample was then taken to yield/ ultimate failure; the results were recorded as follows.

Results:

Sample	2/3 design load	Design load	Ultimate load
MC100	83.3Kn	125Kn	137.34Kn
result	Pass	Pass	N/A

Summary:

The sample above achieved the requested compressive loads; the chamber was therefor deemed satisfactory and fit for purpose.

Test report compiled by: S.Rogers senior test engineer

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