



TEST REPORT

1710 x 600 x 200 Composite Trench Panel BS EN124 C250 Test

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Report by:

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Date test carried out:

30th July 2015

Customer name:

Fibrelite Composites Ltd.
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Clarifying Statements:

1. The results reported have been performed in accordance with the test requirements agreed by the customer (Fibrelite Composites Ltd.) and laid down in the BS EN124 1994 standard.
2. This report does not include or imply any expert opinions as to the serviceability of the sample tested or their suitability for a specific purpose.
3. The submitter disclaims any liability of any kind for any damage whatsoever resulting from the use of either data in the files or the attached values of the test results reported.
4. The report may not be reproduced other than in full, except with the prior written consent of the Engineering Dept., Lancaster University.
5. All testing has been carried out in within the Engineering Department, Gillow Ave., Lancaster University, Bailrigg, Lancaster LA1 4YW.
6. This report applies only to those items and/or materials that have been tested and reported on herein. No inference shall be made to similar test items or materials/ samples.

Panel

The panel supplied for testing is a 1710mm long x 600mm wide x 200mm deep composite trench panel. (Photo.1)



Photo. 1

Test Rig

The test rig consists of a 'giant mecano' frame bolted to the floor and supporting the Enerpac 50 ton hydraulic cylinder. (Photo 2)



Photo. 2

The panel was supported on steel channels with two 65mm wide x 50mm deep steel bars at each end leaving a span of 1610mm.

Test

The test was carried out in accordance with BS EN 124, Class C250.

The load was applied to the panel through a 250mm diameter by 45mm thick steel block with a 250mm diameter by 10mm rubber pad between the block and panel.

The panel was tested at a span of 1610mm.

The load was measured using a 1000kN load cell (serial no. 3243N) and digital load indicator (serial no. D.I.B.1).

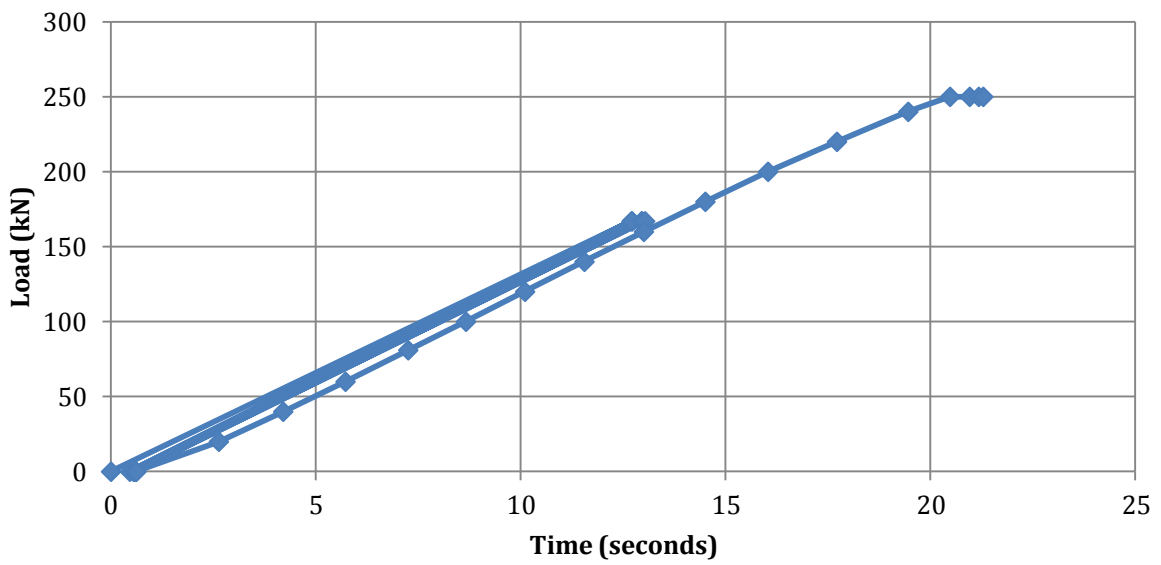
The deflection was measured at the centre on the underside of the panel using a dial indicator.

The panel was loaded to $\frac{2}{3}$ of the test load and then released. This was repeated five times. It was then loaded to try and achieve the test load of 250kN.

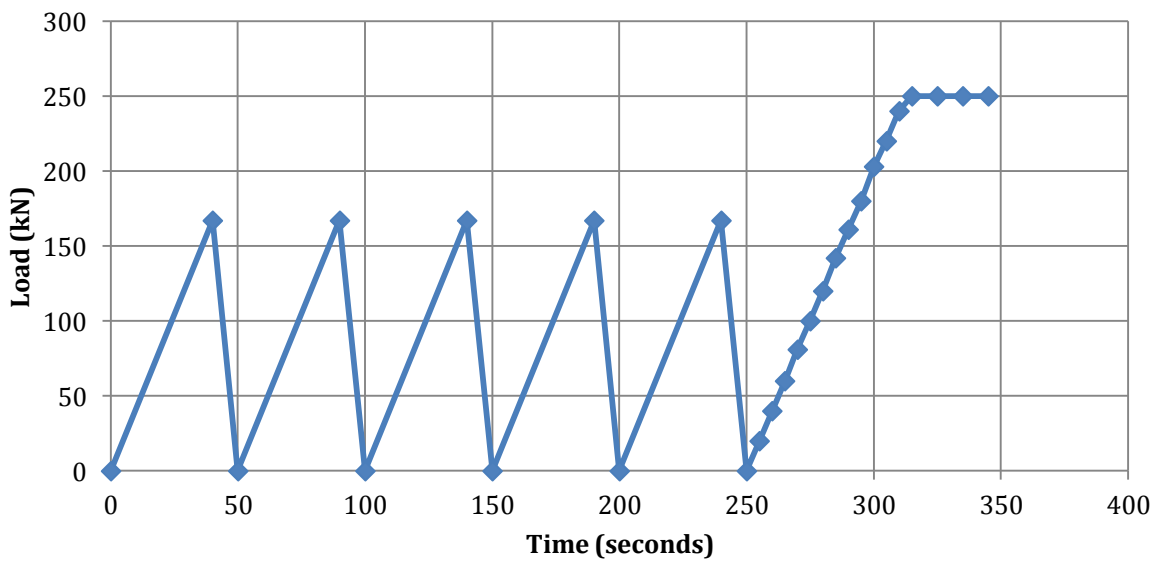
Results

LOAD (kN)	DEFLECTION (mm)	REMARKS
0	0.00	
167	12.71	Some light racking noises from about 100kN just for the 1 st cycle.
0	0.46	
167	12.70	
0	0.55	
167	12.95	
0	0.58	
167	12.95	
0	0.60	
167	13.03	
0	0.62	
20	2.63	
40	4.20	
60	5.72	
81	7.25	
100	8.66	
120	10.10	
140	11.55	
160	13.00	
180	14.50	
200	16.03	
220	17.71	
240	19.45	
250	20.47	
250 (10 seconds)	20.95	
250 (20 seconds)	21.17	
250 (30 seconds)	21.28	PASS
0	1.01	
315	Dial gauge removed.	Louder cracking noises. Loading pad pushing into top face.
332	-	Loud bang and large crack on top face - Failure.

Yellow Trench Panel C250 Test



Yellow Trench Panel C250 Test



In accordance with EN124 Clause 8.3.1 the permanent set of the panel was 0.62mm which is within the permissible stated in Table 8 of the standard. ($1/300 \times 600 = 2.00\text{mm}$).

The panel held the test load of 250kN for the required 30 seconds.

The panel therefore passed the EN124 C250 test for both permanent set and load.

After the panel had been loaded to the test load of 250kN and held for the required 30 seconds the load was released and a permanent set of 1.01mm recorded.

The dial gauge was then removed from under the panel to avoid damage.

The panel was then loaded further up to failure which occurred at 332kN. (Photos.3 & 4)

Large crack

Pad pushing into face



Photo.3



Photo.4