



TEST REPORT

FM65-160/50/LD Trench Panel EN124 B125 Test

Date: 17/07/14

Client: Fibrelite Composites Ltd.

Panel

The panel supplied is a rectangular FM65, 1600mm x 650mm x 50mm and of composite construction. (See photo. 1)



Photo. 1

Test Rig

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



Photo. 2

The panel was supported on steel channels all round giving a span of 1470mm x 520mm.

Test

The test was carried out in accordance with BS EN 124, Class B125.

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

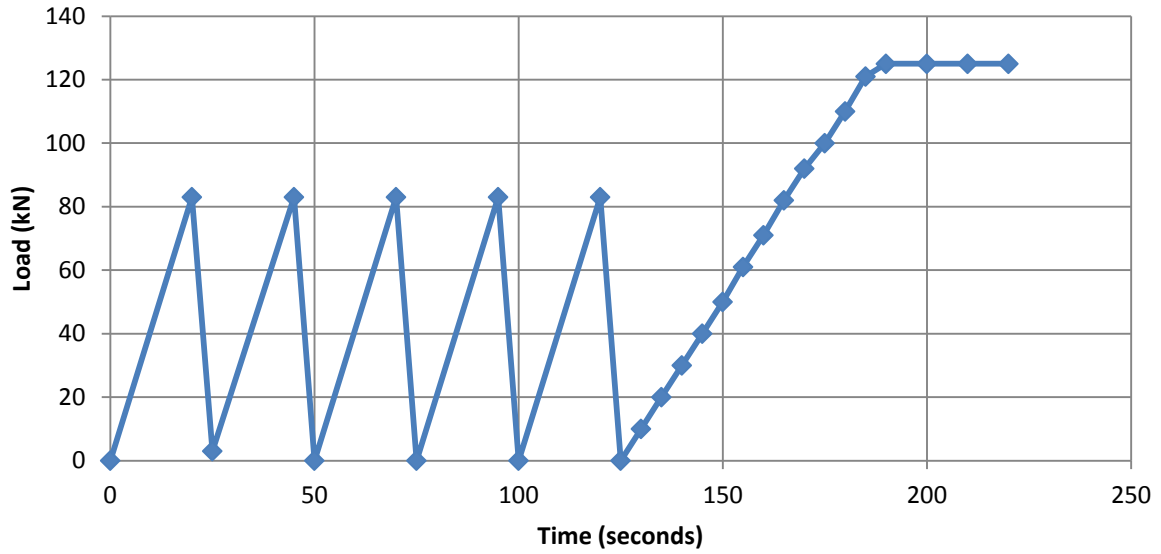
The deflection was measured at the centre on the underside of the panel using a dial indicator (serial no. SFB293).

The panel was loaded to 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 125kN.

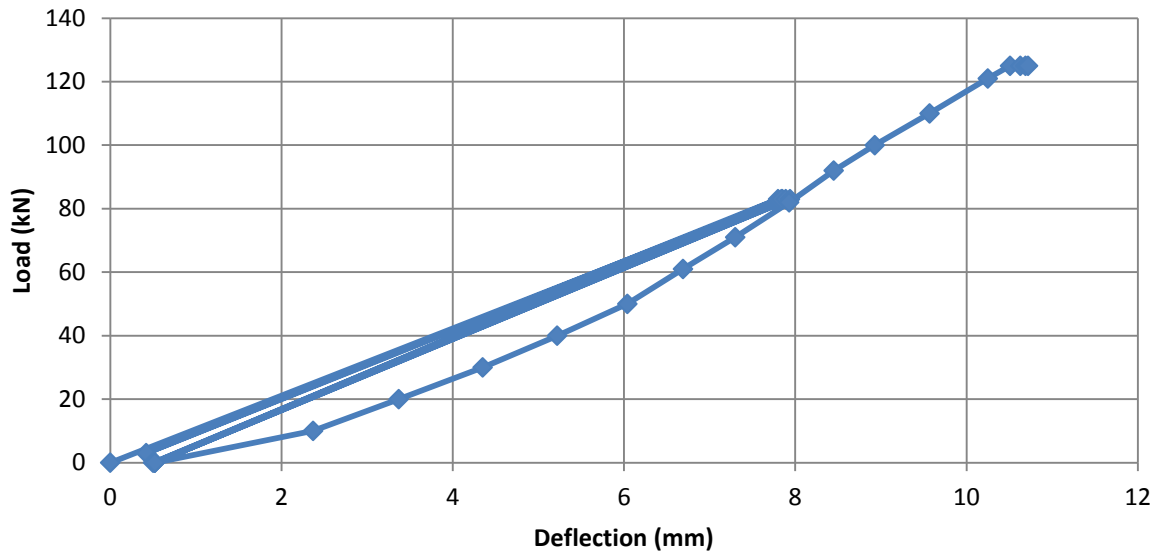
Results

LOAD	DEFLECTION (mm)	REMARKS
0	0.00	
83	7.85	
0	0.42	
83	7.80	
0	0.52	
83	7.84	
0	0.50	
83	7.89	
0	0.52	
83	7.94	
0	0.52	
10	2.37	
20	3.37	
30	4.35	
40	5.22	
50	6.04	
61	6.69	
71	7.30	
82	7.93	
92	8.45	
100	8.93	
110	9.57	
121	10.25	
125	10.51	
125 (10 seconds)	10.63	
125 (20 seconds)	10.69	
125 (30 seconds)	10.72	
0	0.74	
125	10.73	
130	11.00	Light cracking noises
140	11.62	
160	12.80	
180	14.10	
200	15.60	Louder cracking and load starting to drop off.
208	19.50	Loud bang - failure.

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In accordance with EN124 Clause 8.3.1 the permanent set of the panel was 0.52mm which is within the permissible stated in Table 8 of the standard. ($1/100 \times 520 = 5.20\text{mm}$).

The panel reached the test load of 125kN and held that load for the required 30 seconds with no visible signs of cracking.

The panel therefore passed the EN124 B125 test.

After the panel had passed the EN124 test the load was removed and a deflection reading taken at zero load. After letting the panel settle for 30 seconds a deflection of 0.74mm was recorded.

The panel was then loaded again until failure which occurred at 208kN.

Photograph 3 shows the panel in the test rig at failure.

There were no visible cracks at failure but there was a permanent depression in the panel in the area of the loading pad.



Photo.3

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