

TEST REPORT

FL600 EN124 C250 Cover Test

Date: 18/06/09

Client: Fibrelite Composites Ltd.

Cover

The cover supplied is a Fibrelite FL600. (Photo.1)
Cover No. – No marking on cover.

The cover is 687mm in overall diameter by 100mm deep

The cover was also supplied with a composite frame for it to sit in and has a clear opening of 610mm.

Serial No. 094835 600F



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)

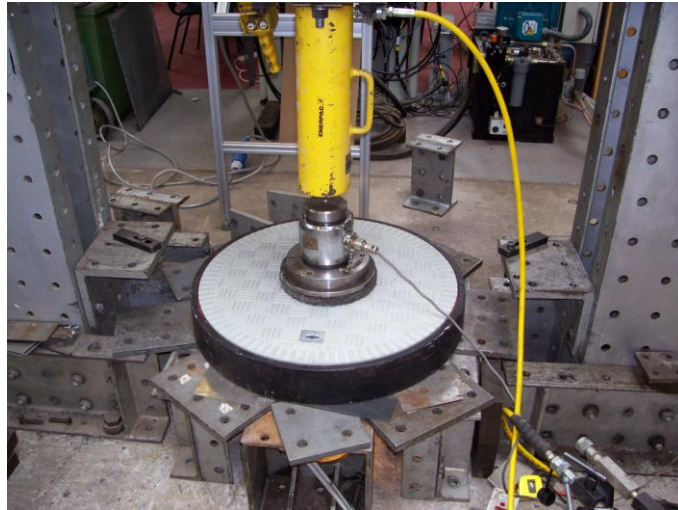


Photo. 2

Test

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

The load was applied to the cover through a 250mm diameter by 45mm thick steel block with a 250mm diameter by 25mm rubber pad between the block and cover.

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 cover using a dial indicator.

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The cover 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 250kN test load.

Results

LOAD (kN)	DEFLECTION (mm)	REMARKS
0	0.00	
167	9.42	Light cracking noises from 30kN onwards.
0	1.10	
167	9.43	
0	1.20	
167	9.48	
0	1.21	
167	9.55	
0	1.24	
167	9.58	
0	1.28	
19	2.93	
40	4.06	
61	5.07	
79	5.88	
100	6.85	
123	7.80	
140	8.53	
159	9.30	
181	10.30	
202	11.40	
221	12.41	
240	13.45	
250	14.15	

In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 1.28mm which is within the permissible stated in Table 8 of the standard. ($1/300 \times 610 = 2.03\text{mm}$).

The cover was loaded up to the test load of 250kN and held for 30 seconds. The cover held this load with no visible signs of any cracks and therefore passed the load test.

After the test the cover was removed from the test rig and thoroughly inspected for damage.

There were no signs of any cracks on the top surface of the cover.

There was no sign of any damage to the frame.

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