



TEST REPORT

FL76 Cover Test

Date: 13/03/06

Client: Fibrelite Composites Ltd.

Cover

The cover supplied is a Fibrelite FL76. It has an identification mark of 06 1634 76 D400 Sample (See photo. 1)

The cover was also supplied with a new aluminium frame for it to sit in.



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)

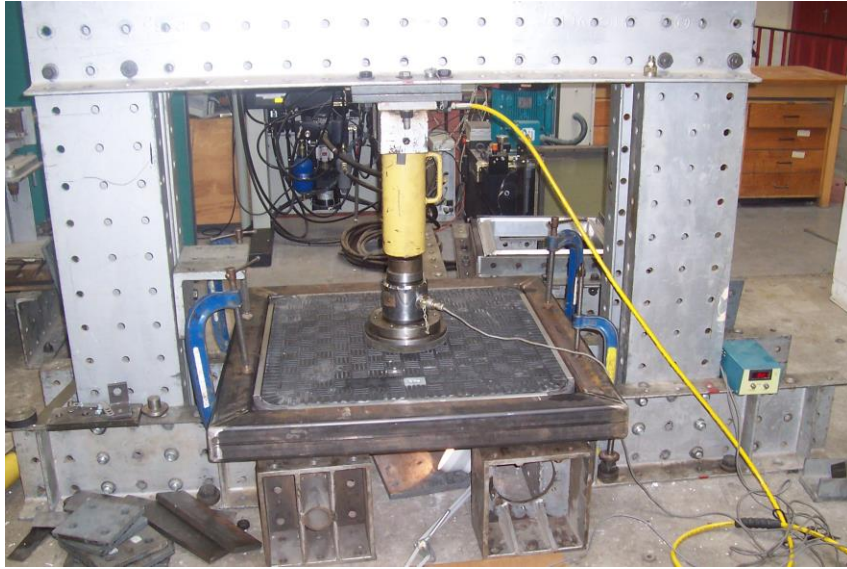


Photo. 2

The cover and frame were sat on steel channels and plates with a 100mm x 100mm steel box section frame around it to provide support to the aluminium frame. (see photo.3)

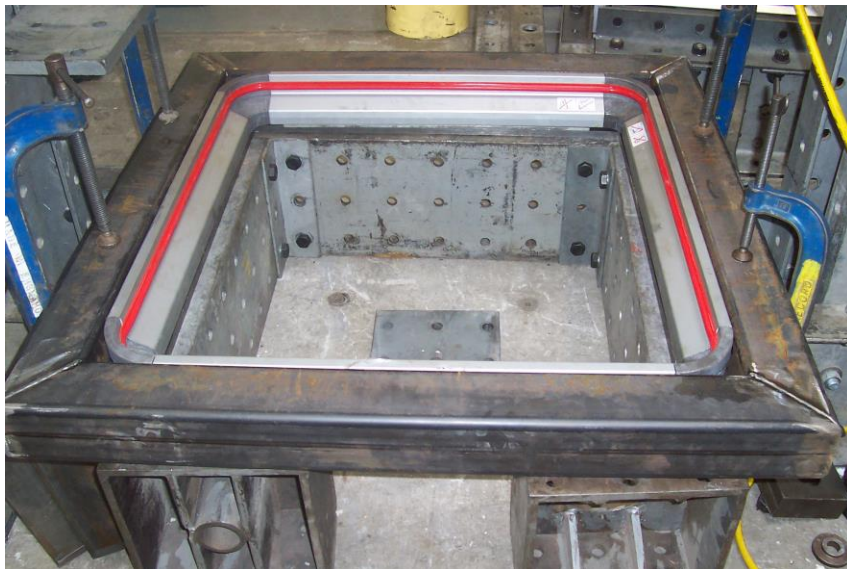


Photo. 3

Test

The test was carried out in accordance with BS EN 124, Class D400

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).

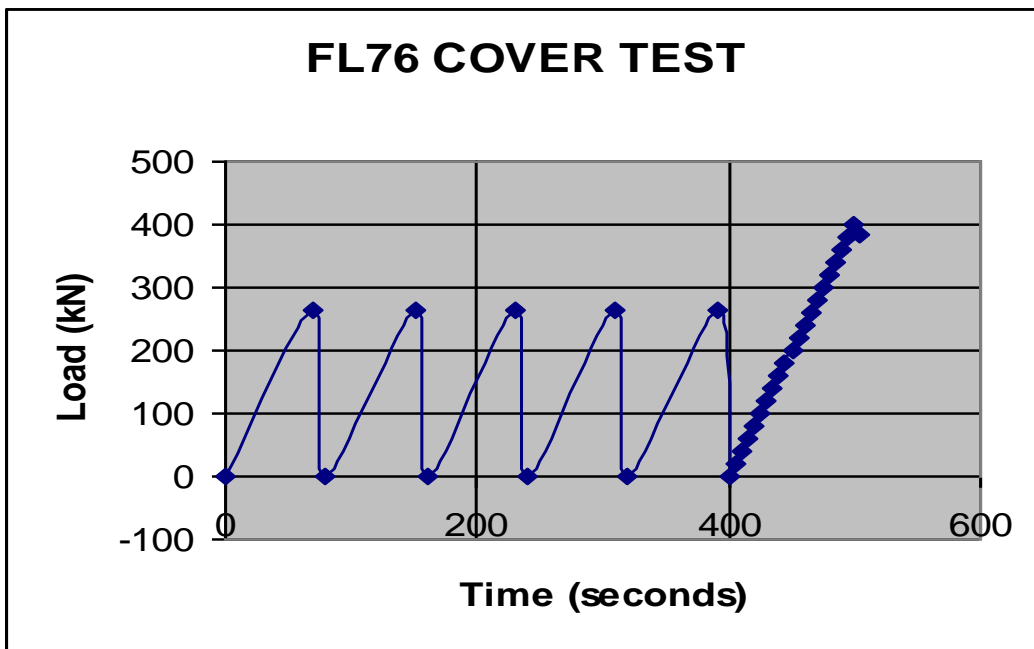
The deflection was measured at the centre on the underside of the cover using a dial indicator.

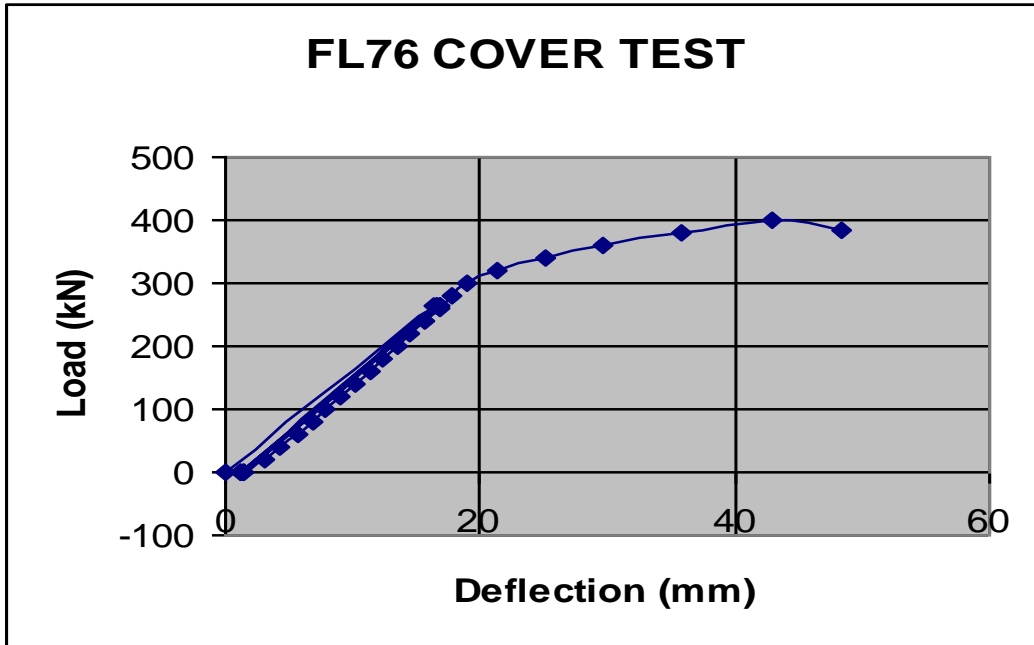
The cover was loaded to 2/3 of the test load and then released. This was repeated five times. It was then loaded to try and achieve the 400kN test load.

Results

Load (kN)	Deflection (mm)	Remarks
0	0	
266	16.41	
0	1.23	
266	16.60	
0	1.30	
266	16.64	
0	1.32	
266	16.76	
0	1.35	
266	16.80	
0	1.38	
20	3.11	
40	4.32	
60	5.60	
80	6.85	
100	7.89	
120	9.00	
140	10.09	
160	11.28	
180	12.38	

200	13.45	
220	14.50	
240	15.65	
260	16.86	
280	17.88	
300	19.01	
320	21.30	
340	25.23	
360	29.60	
380	35.74	
400	42.86	





In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 1.38mm which is within the permissible stated in Table 8 of the standard. ($1/300 \times 760 = 2.53\text{mm}$).

In accordance with the EN124 Standard, Clause 8.3.2, the test load of 400kN was maintained for 30 seconds.