



## **TEST REPORT**

### **FL760 Cover Test to EN124 C250**

Date: 19/06/09

**Client: Fibrelite Composites Ltd.**

#### **Cover**

The cover supplied is a Fibrelite FL760 (Photo.1)  
No. on cover – 09 4504 760

The cover was also supplied with a new composite frame for it to sit in.  
Frame No. – 094007 760F

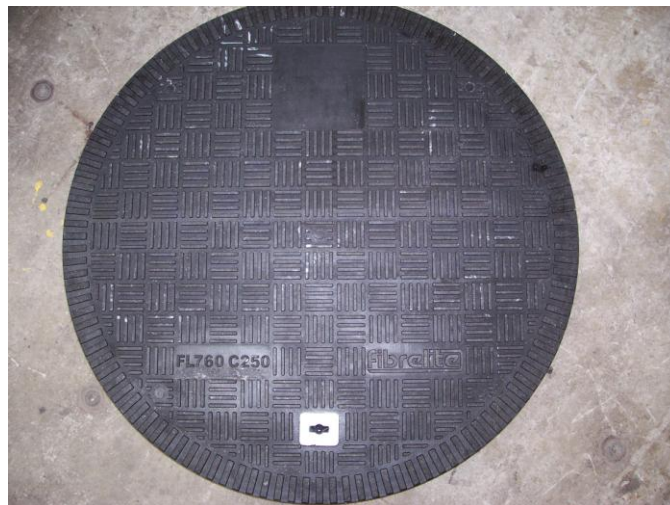


Photo.1

## **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 ).

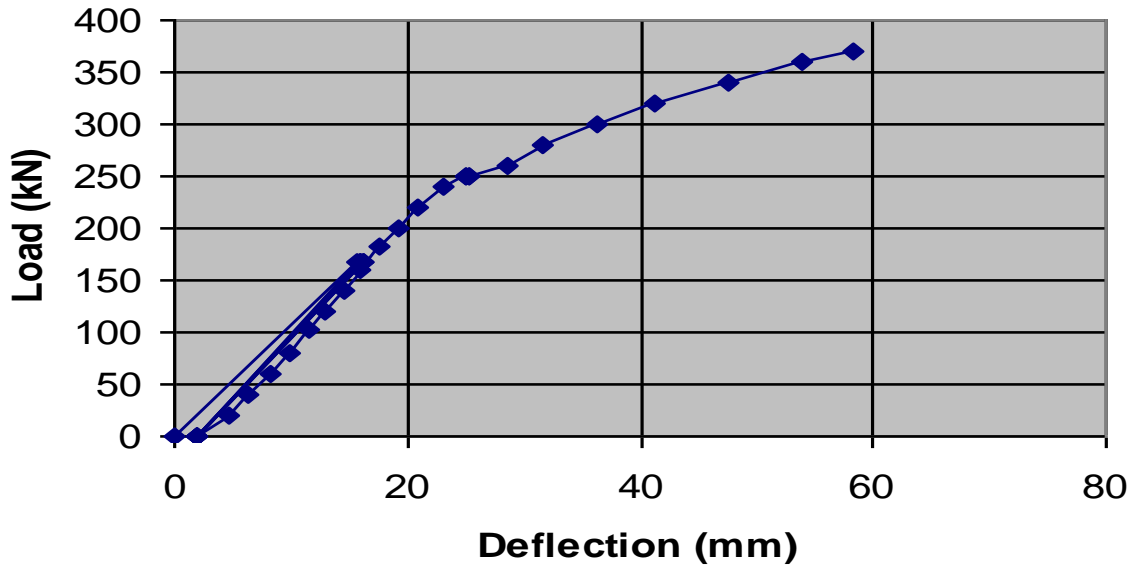
The deflection was measured at the centre on the underside of the cover using a dial indicator.

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.

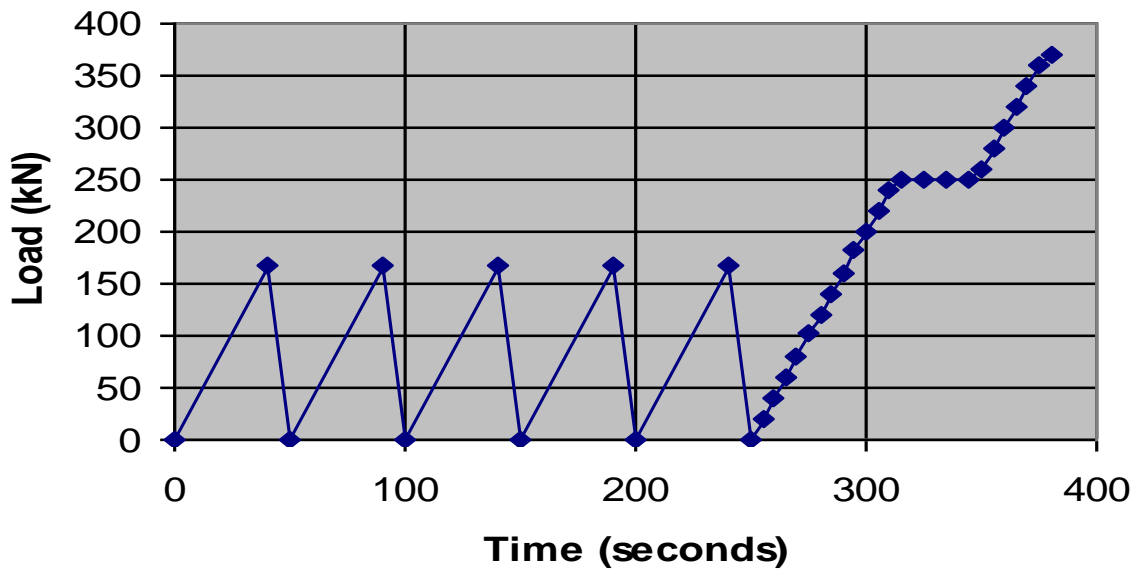
## **Results**

<b>LOAD (kN)</b>	<b>DEFLECTION (mm)</b>	<b>REMARKS</b>
0	0.00	
167	15.60	
0	1.80	
167	15.90	
0	1.85	
167	16.05	
0	1.88	
167	16.10	
0	1.90	
167	16.19	
0	1.93	
19	4.70	
39	6.44	
60	8.25	
81	9.93	
102	11.52	
120	12.96	
140	14.52	
160	15.98	
182	17.59	
200	19.22	
220	20.93	
240	23.10	
250	24.91	
250 (10 secs.)	25.02	
250 (20 secs.)	25.30	
250 (30 secs.)	25.41	
260	28.70	
280	31.50	
300	36.24	
320	41.21	
340	47.52	
360	53.90	Lots of cracking.
369	58.25	Loud bang! - failure

### FL760 EN124 Class C250



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**In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 1.93mm which is within the permissible stated in Table 8 of the standard. (1/300 x 760 = 2.53mm).**

**The cover held the test load of 250kN for the required 30 seconds and therefore passed the EN124 C250 test.**

By 360kN there were lots of loud cracking and the cover finally failed at 369kN with a loud bang.

After the cover was removed from the frame it was thoroughly inspected for damage.

On the top surface the cover was permanently deformed in the area of the loading pad and a large crack ran through the centre of the cover and down the edge. (See photos 3 & 4)



Photo.3



Photo.4

On the underside there were two large cracks running right across the cover and at right angles to each other. (See photo.5)



Photo.5

The frame showed no signs of damage.

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