



## **TEST REPORT**

### **FL60 Cover Test to EN124 C250**

Date: 19/06/09

**Client: Fibrelite Composites Ltd.**

#### **Cover**

The cover supplied is a Fibrelite FL60 (Photo.1)  
No. on cover – 09 5023 60

The cover was also supplied with a new composite frame for it to sit in.  
Frame No. – 09 1303



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. The frame was sat on steel channels with a steel support frame made from 100mm x 100mm box section steel around it. (See photo 2)

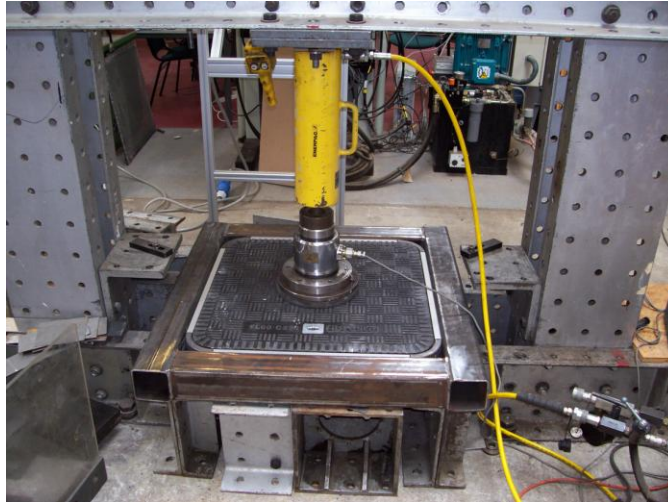


Photo.2

## **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.

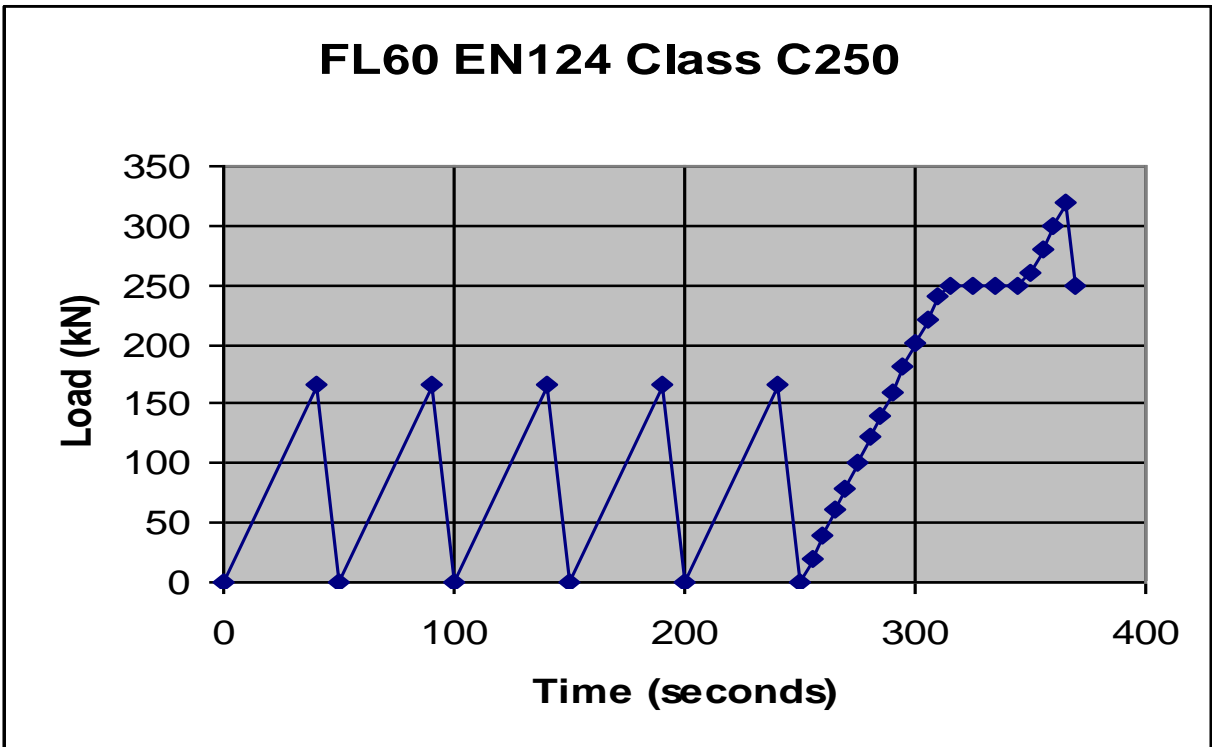
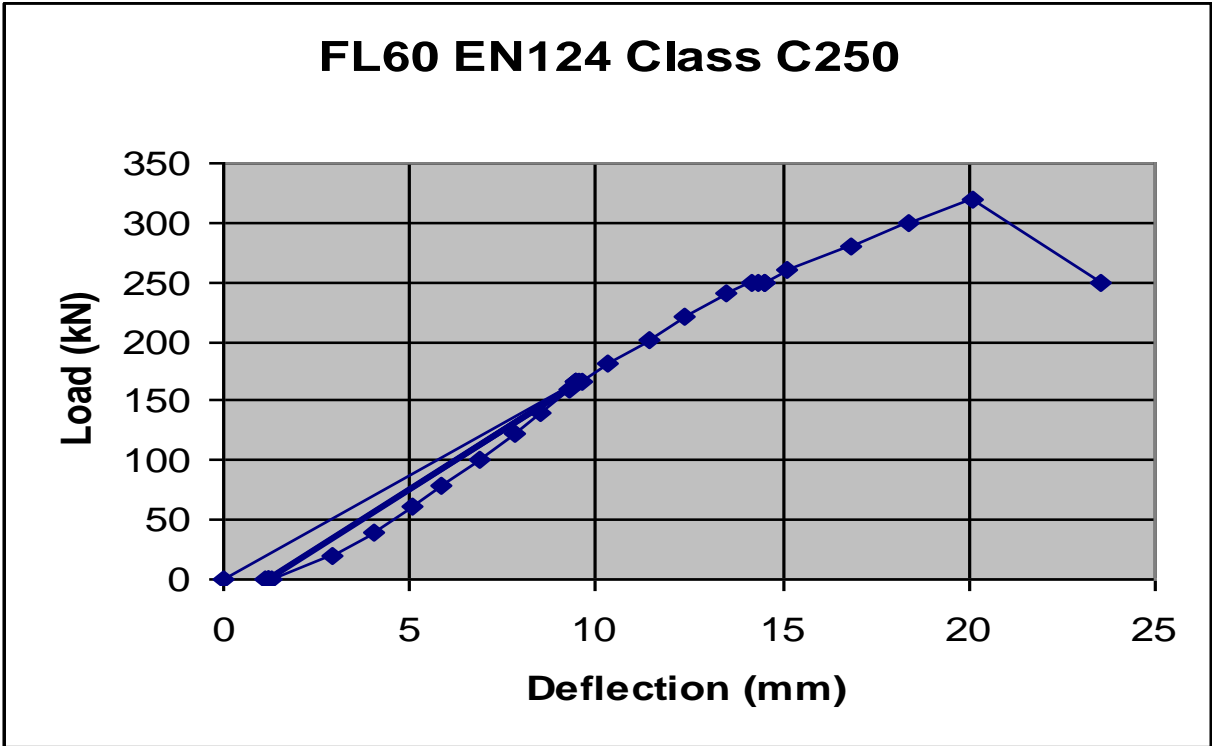
The load was measured using a 1000kN load cell (serial no. 3243N) and digital load indicator (serial no. D.I.B.1 ).

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

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	
250 (10 secs.)	14.37	
250 (20 secs.)	14.49	
250 (30 secs.)	14.55	
260	15.13	
280	16.80	Loud cracking noises
300	18.40	
320	20.10	Loud bang - failure
250	23.55	



**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. ( $1/300 \times 600 = 2.00\text{mm}$ ).**

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

Light cracking noises were heard from about 30kN getting louder and more significant by 280kN

At 320kN the cover failed with a number of loud cracks and bangs.

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

On the top surface there was a large crack/split near the centre running across the cover and down the edge. (See photos 3 & 4)



Photo.3



Photo.4

The frame showed no signs of damage.

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