



TEST REPORT

FL90/CD Cover Test

Date: 23.5.2018

Client: Fibrelite Composites Ltd.

Cover

The cover supplied is a Fibrelite FL90/CD. (Photo.1)
Cover No.

The cover is 975mm in overall diameter by 100mm deep with one 180mm access hole in the centre. This access hole has a 228mm diameter by 45mm thick plug.

Both cover and cap had a red sealing ring fitted.

The cover was also supplied with a new composite frame for it to sit in.
Model No. FL90 C250 Serial No.



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)

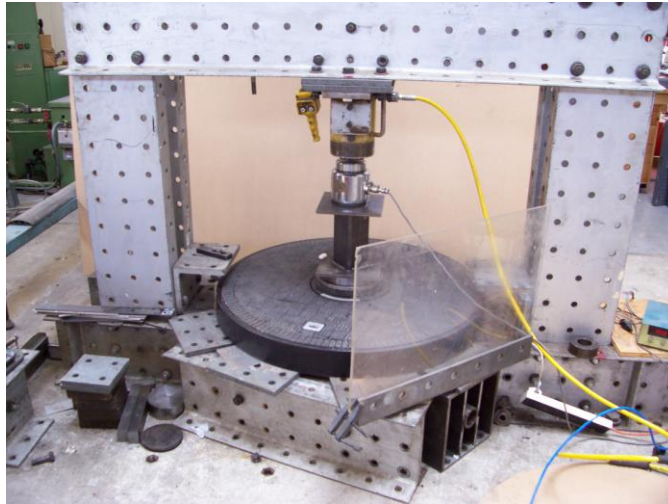


Photo. 2

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.

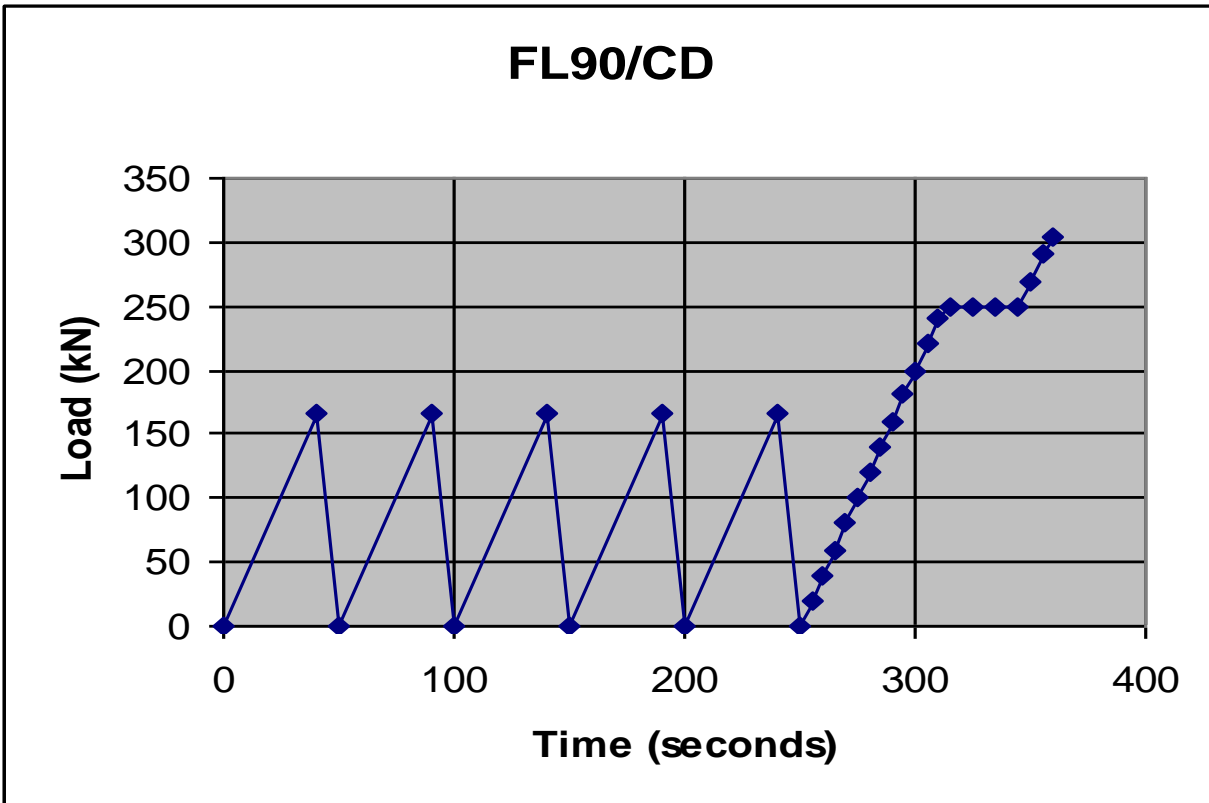
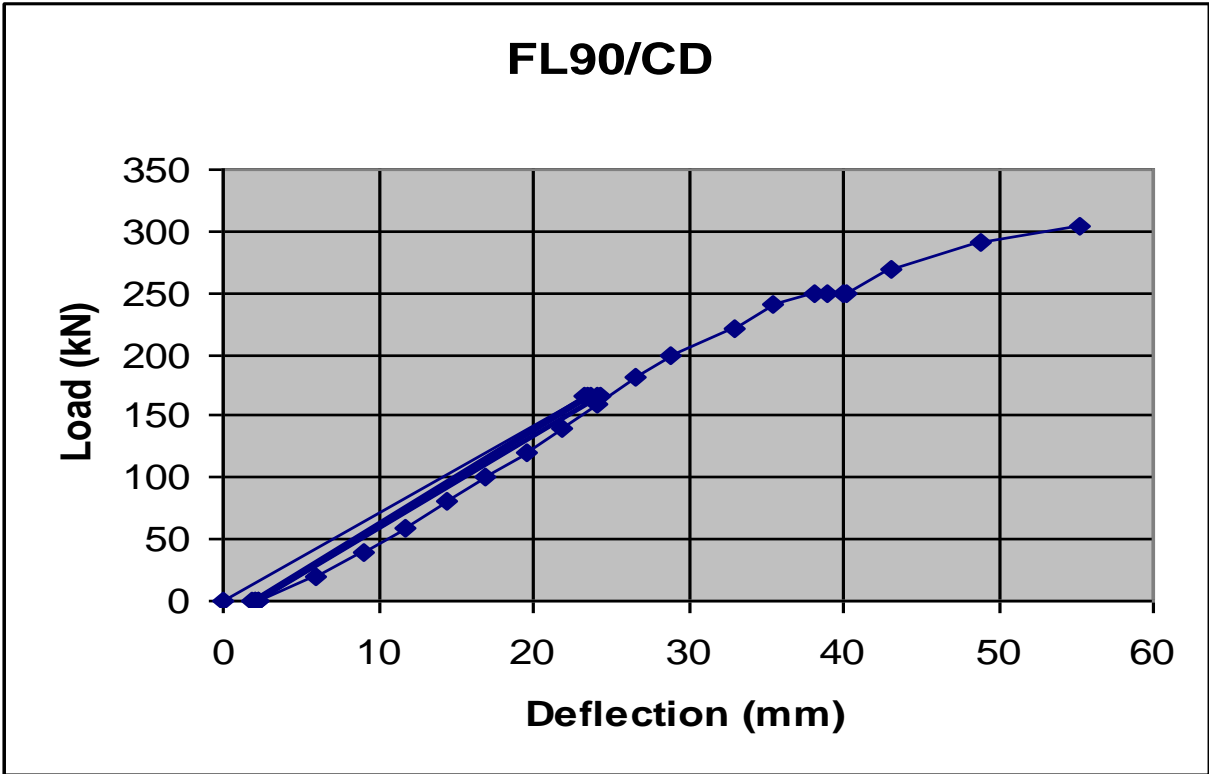
The load was measured using a 1000kN load cell (serial no. 3243N) and digital load indicator (serial no. D.I.B.1).

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

LOAD (kN)	DEFLECTION (mm)	REMARKS
0	0.00	
167	23.21	
0	1.79	
167	23.37	
0	2.00	
167	23.67	
0	2.05	
167	23.95	
0	2.21	
167	24.00	
0	2.32	
20	6.05	
40	9.00	
60	10.98	
80	14.35	
100	17.00	
120	19.55	
140	21.91	
160	24.16	
182	26.50	
200	28.90	
220	32.85	
240	35.50	
250	38.20	
250 (10 secs.)	39.00	
250 (20 secs.)	39.95	
250 (30 secs.)	40.00	



In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 2.32mm which is within the permissible stated in Table 8 of the standard. ($1/300 \times 900 = 3.00\text{mm}$).

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.

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