



TEST REPORT

BM8080 EN124 B125 Cover Test BIF - 14823

Date: 07/08/14

Client: Structural Science Composites Ltd.

Cover

The cover supplied is a BM8080, 860mm x 860mm x 85mm overall composite cover. (Photo.1)

Cover No. – 14823

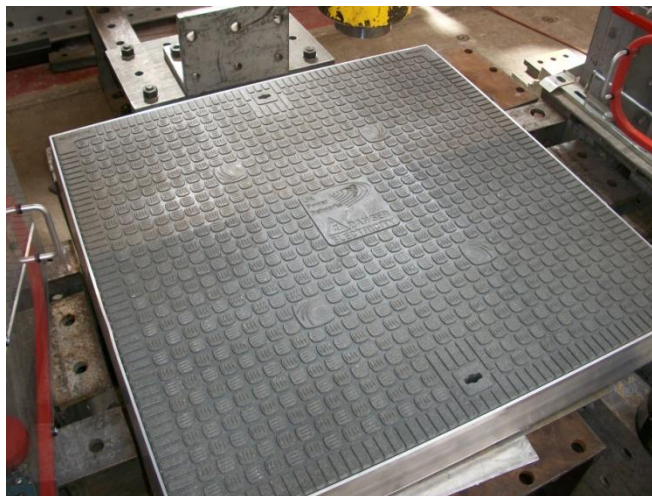


Photo.1

The frame supplied was of aluminium section welded in the four corners with an 8mm round bar tack welded on the underside in each corner. There was a clear opening of 800mm x 800mm (Photos.2 & 3)

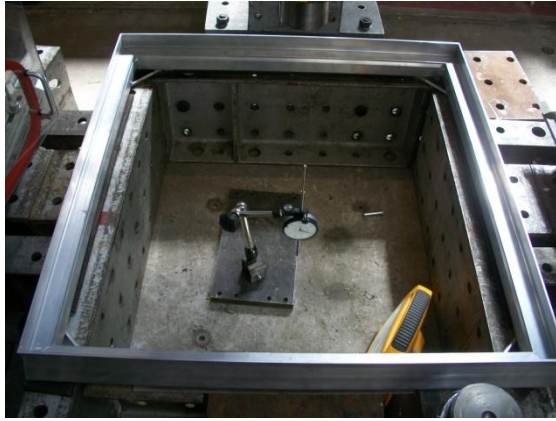


Photo.2



Photo.3

Test Rig

The test rig consists of a 'giant mecano' frame bolted to the floor and supporting the Enerpac 50 tonne hydraulic cylinder. The cover and frame sat on steel channels, with 50mm x 12mm steel plates and shims to support and level. (Photo. 4)

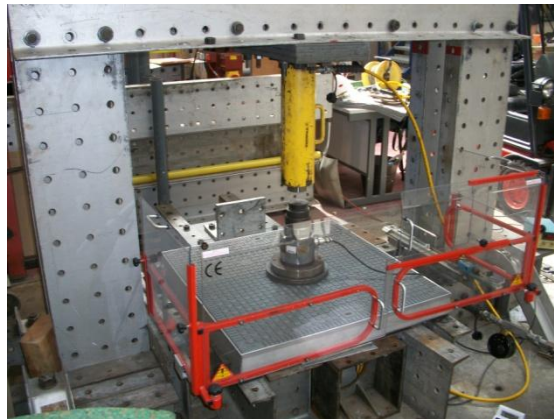


Photo.4

Test

The test was carried out in accordance with BS EN 124, Class B125
The load was applied at a rate of 5kN/min. through a 250mm diameter by 45mm thick steel block with a 250mm diameter by 10mm 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).

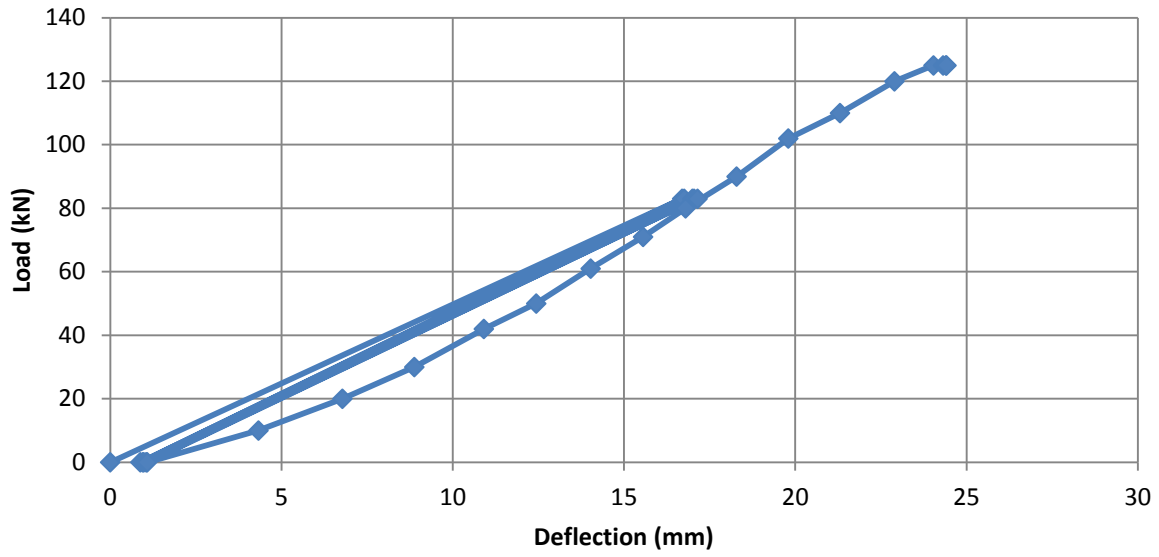
The deflection was measured at the geometric centre on the underside of the cover using a dial indicator. (Serial No. PBC475)

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 125kN test load.

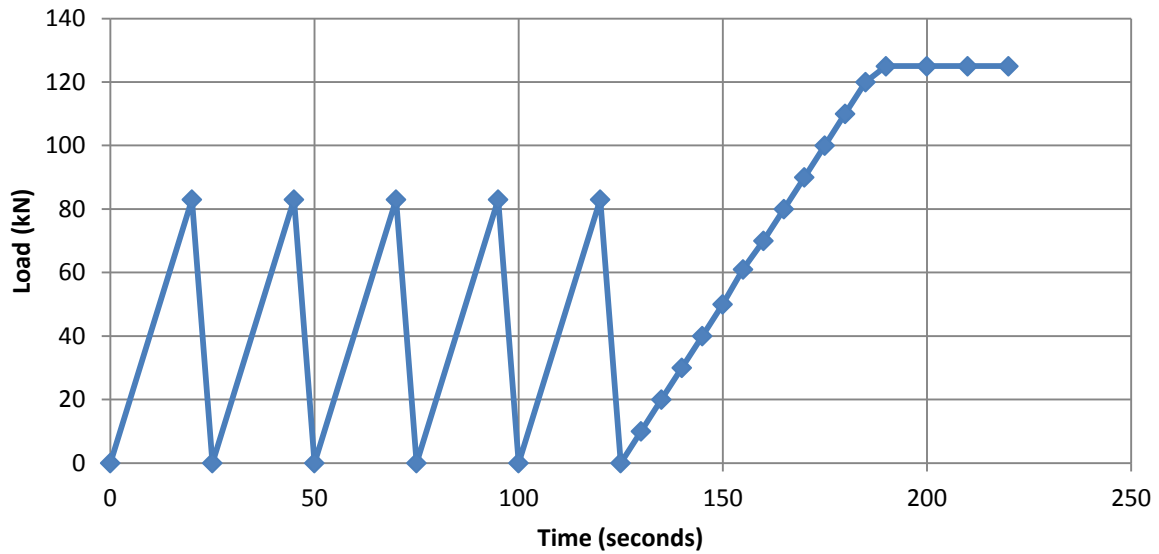
Results

LOAD (kN)	DEFLECTION (mm)	REMARKS
0	0.00	
83	16.7	Light cracking noises from about 20kN onwards just for the 1 st cycle.
0	0.88	
83	16.76	
0	0.95	
83	17.00	
0	0.98	
83	17.05	
0	1.05	
83	17.15	
0	1.08	
10	4.33	
20	6.78	
30	8.88	
42	10.91	
50	12.44	
61	14.03	
71	15.56	
80	16.80	
90	18.29	
102	19.80	
110	21.31	
120	22.90	
125	24.04	
125 (10 seconds)	24.32	
125 (20 seconds)	24.40	
125 (30 seconds)	24.42	No signs of any cracking.
0	1.72	

BM8080 No.14823 B125 Test



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In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 1.08mm which is within the permissible stated in Table 8 of the standard. ($1/100 \times 800 = 8.00\text{mm}$).

The cover reached the test load of 125kN and held for the required 30 seconds so therefore passed the EN124 B125 load test.

After the cover had been loaded to the test load of 125kN and held for 30 seconds it was unloaded to zero and a permanent set of 1.72mm measured.

The cover was then unloaded and inspected for damage where there was none found. (Photos.5 and 6)



Photo.5



Photo.6

The frame showed no signs of any damage.

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