



TEST REPORT

EN124 Class B125 600 x 600 Composite Cover

Date: 23/07/09

Client: Structural Science Composites

Cover

The cover supplied is a square 600mm x 600mm composite cover. (See photos.1 & 2)
Cover No. 1238

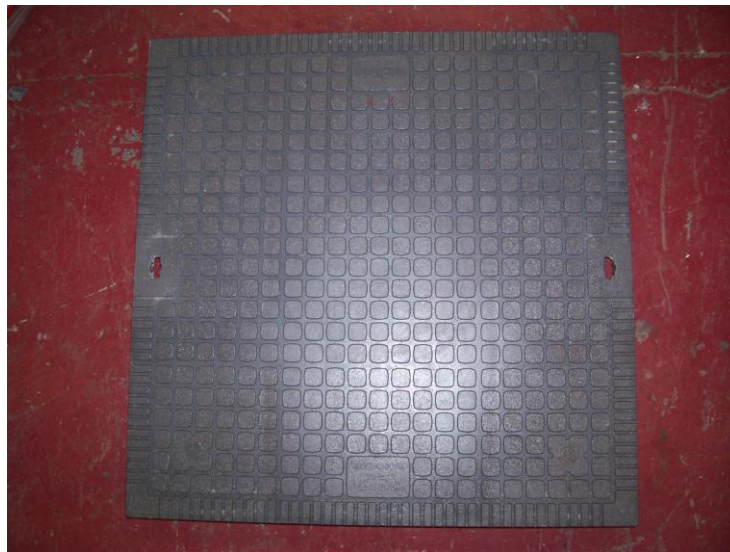


Photo.1 (Top)



Photo.2 (underneath)

An aluminium frame was supplied with the cover with a clear opening of 600mm x 600mm. (See photo.3)



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 and plates with shims to level. (Photo 4)

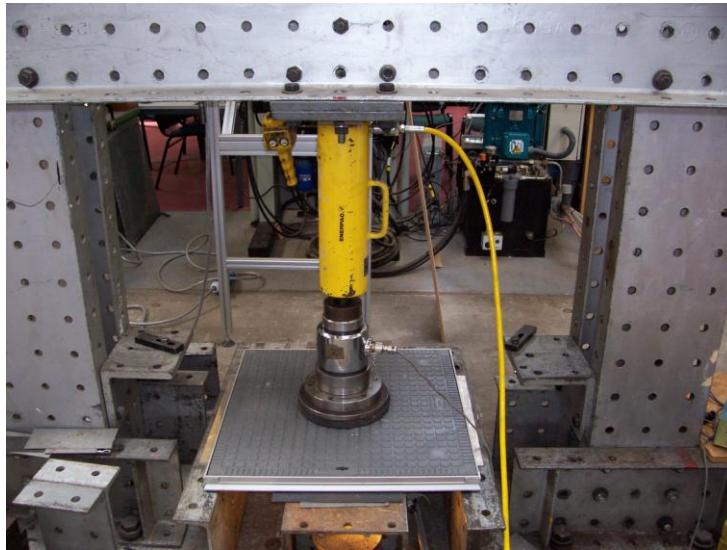


Photo.4

Test

The test was carried out in accordance with BS EN124 Class B125.

The load was applied to the cover through a 250mm diameter x 40mm thick steel block with a 250mm diameter x 1" 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).

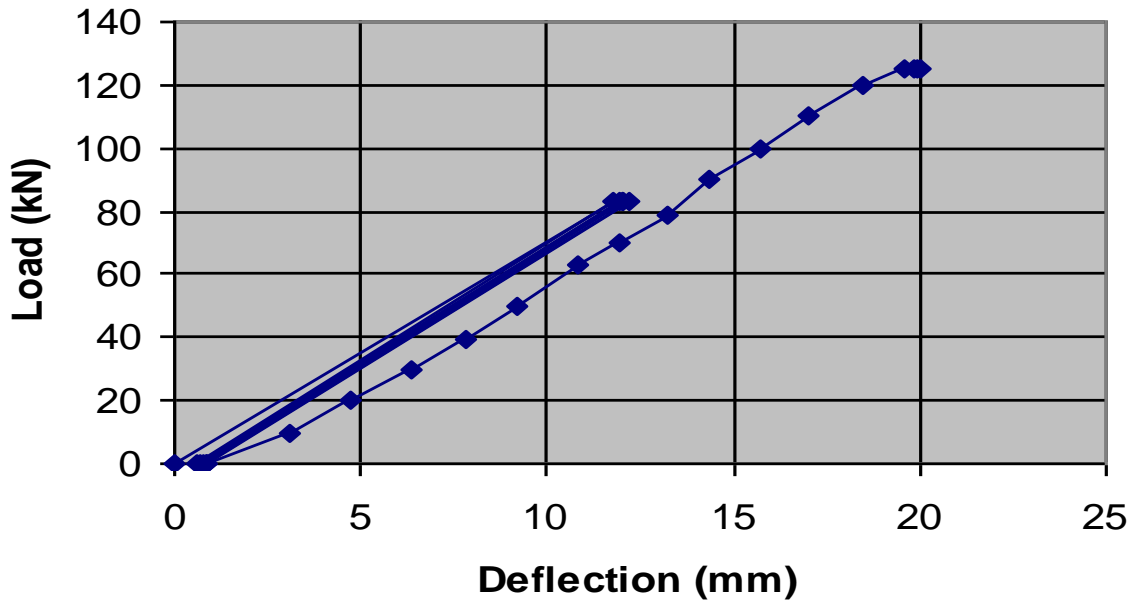
The deflection was measured at the centre on the underside of the cover using a dial indicator.

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 125kN test load.

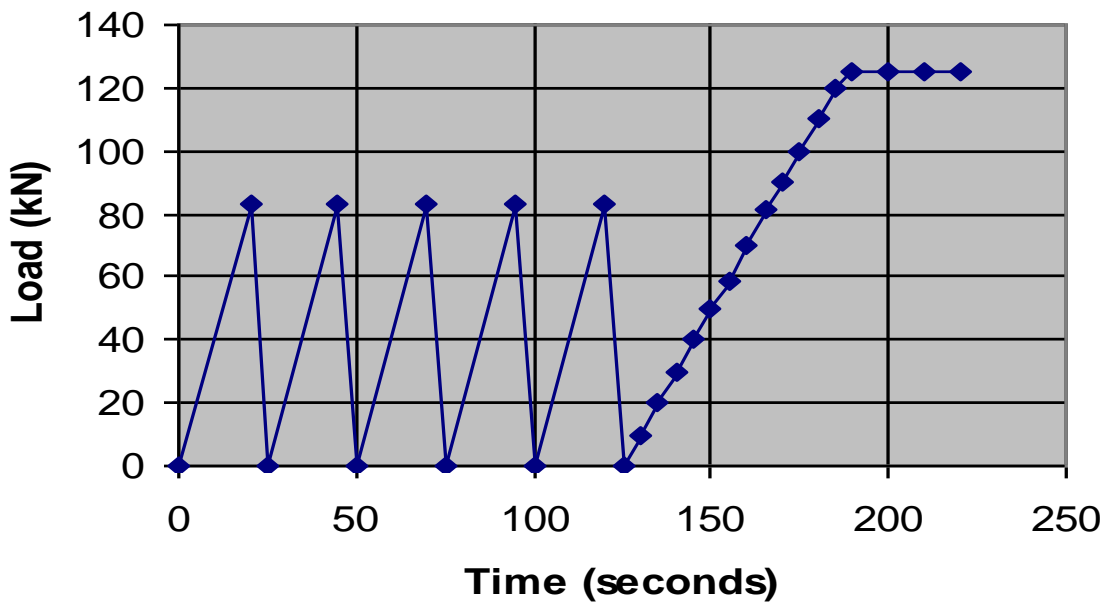
Results

| LOAD (kN) | DEFLECTION (mm) | REMARKS |
|------------------|------------------------|-----------------|
| 0 | 0 | |
| 83 | 11.74 | |
| 0 | 0.63 | |
| 83 | 11.98 | |
| 0 | 0.71 | |
| 83 | 12.02 | |
| 0 | 0.79 | |
| 83 | 12.07 | |
| 0 | 0.82 | |
| 83 | 12.18 | |
| 0 | 0.87 | |
| 10 | 3.13 | |
| 20 | 4.76 | |
| 30 | 6.38 | |
| 40 | 7.86 | |
| 50 | 9.20 | |
| 59 | 10.49 | |
| 70 | 11.97 | |
| 81 | 13.20 | |
| 90 | 14.35 | |
| 100 | 15.68 | |
| 110 | 16.97 | |
| 120 | 18.48 | |
| 125 | 19.55 | |
| 125 (10 seconds) | 19.85 | |
| 125 (20 seconds) | 19.93 | |
| 125 (30 seconds) | 19.99 | Cover held load |
| | | |

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In accordance with EN124 Clause 8.3.1 the permanent set of the cover was 0.87mm which is within the permissible stated in Table 8 of the standard. ($1/100 \times 600 = 6.00\text{mm}$).

The cover was loaded up to the test load of 125kN and held for 30 seconds. The cover held this load with no visible signs of any cracks and therefore passed the load test.

The frame showed no signs of any damage.

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