

## Eco Beam Tests and Approvals

### Tests and Approvals SABS Test: Eco Beam Load Test

Date of the test: 1996—08—13

#### Method:

Each of the 13 Eco-beams were installed in a 500kn machine a very universal testing machine and supported on two 38 mm diameter lower platen bearers spaced 1.8m apart. A 10mm thick steel plate that was longer than the total length of the beam was then installed on the top surface of the beam. This plate ensured that the loading of the top surface was evenly distributed. A gradually increasing force was then applied to each beam via 2 x 20mm diameter platens that were spaced 190mm apart.

#### Results:

Findings were acceptable and in cases superior to the SABS requirements.

### SABS Test: Structural and Rain penetration tests

Date of the test: 1996—03—08

#### Method:

The house was of a modified timber frame construction and 30,28meters square in size. The house contained two doors and six windows. The timber frame consisted of beams referred to as eco-beams. The beams were made of 2 x 38 x 28 mm tanneleth treated batons space approximately 200mm apart and fixed together by a galvanized steel lattice. These beams were spaced 900mm apart and also placed around each door or window opening. The foundation consisted of a 10 to 1 sand/cement mixture: A 0.25mm PVC sheet was placed on the foundation as damp course.

#### Results:

##### 1) Structural stability:

- Soft body impacts (Sandbag): The walls as tested exceeded the requirements of the Agreement Board in respect of soft body impacts.
- Hard body impacts (Steel tool): The walls as tested exceeded the requirements of the Agreement Board in respect of hard body impacts.

##### 2) Attachment of fittings:

- The walls tested were found to be suitable for the fixing of light, medium and heavy weight fittings.

##### 3) Rain penetration:

- These tests were conducted over a window which was set back in the wall by 250mm, therefore exposing a large window sill. The rough plaster finish of this sill allowed moisture into the wall but not through the wall. Only the area immediately below the sill was affected. The walls thus as tested satisfied the rain penetration requirements for all areas stipulated in sub-rule KK17 of SABS0400-1990-Code of Practice for the application of the national building regulations.