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**Our reference: FTC 18/231**

**Solid Ceiling Products (Pty) Ltd**  
Postnet Northcliff, Suite 4  
Private Bag X17  
**WELTERVREDE PARK**  
1715

**Attention: Tyrel Manson**

14 February 2019

Dear Sir

## **SANS 10177 – PART 2 TEST RESULTS FOR THE SOLID FIRE RATED DRYWALL SYSTEM**

With reference to the **SANS 10177 – Part 2** test as results:

1. The **Solid Fire Rated Drywall System** was tested using the **SANS 10177 – 2** test protocol on the 30<sup>th</sup> of January 2019.
2. The panel exhibited minimal smoke and steam release for the first hour of the test, thereafter the panel quickly deteriorated. TC 8, a joint thermocouple, exceeded the maximum allowed temperature for a single thermocouple (205 °C) at 1 hour, 15 minutes and 5 seconds. This is considered a failure of the **Insulation** criterion.
3. At approximately 1 hour, 18 minutes and 45 seconds the right hand side joint split open. This caused the system to severely deflect outward, compromising both **Stability** and **Integrity** of the system.
4. Gypsum fire boards from an unknown foreign manufacturer were used in the construction of this system. Post-test the boards were examined and found to have a reinforcement mat, orientated longitudinally and horizontally. Typical fire boards usually have randomly oriented fibers in the plaster mix.

The Test Report and results only relate to the product(s) and/or sample(s) submitted for testing as identified in Section 1 and Annexures and do not apply to any similar product(s) or sample(s) that has not been tested.



Figure 1.1: The unexposed side of the system after the test conclusion



Figure 1.2: The exposed side of the system after the test conclusion

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## DISCUSSION AND CONCLUSION

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Due to premature board failure on the exposed side, the system temperature rose rapidly after approximately 1 hour and 10 minutes. This can be seen by the intermediate steel plate degradation on the exposed side of the system. Using a better quality fire board will greatly increase the fire performance by protecting the system.

The **Solid Fire Rated Drywall System** achieved a 60 minute Fire Resistance Rating according to the **SANS 10177 – 2** test protocol.

We trust the above information would assist you in the matter for improving the system to achieve the desired rating. Should there be any other uncertainties regarding the plaster, please do not hesitate to contact me immediately.

Yours faithfully

A handwritten signature in black ink, appearing to read "J Vogel", written over a horizontal line.

J Vogel  
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