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To	Berkay Dincel	Dincel Construction System Pty Ltd	Berkay@dincel.com.au
Date	22/10/2019	**Job no** FAS190305	**AL no** 1.1
Subject	**Influence of Dincel polymer webs on the overall fire resistance performance**		

Dear Berkay,

Re: Assessment letter on the influence of Dincel polymer webs on the overall fire resistance performance

Test reports assessed

The fire resistance test described in FSV 1346, conducted in accordance with AS 1530.4:2005, comprised of a 3000mm × 3000mm × 200mm thick Dincel wall containing nine prefabricated Dincel-polymer formwork panels filled with normal weight concrete. The polymer webs of these panels contained 115mm diameter holes spaced at 150mm centres. No reinforcement bars were used. A total load of 800kN (267kN/m) was applied to the specimen during the test. The specimen achieved a 240-minute fire resistance period with respect to integrity, in accordance with AS 1530.4:2005.

Fire resistance test report FRT190129 R2.0 comprised of a direct abutting joint between 155mm and 275mm thick Dincel wall separating elements. The Dincel walls were 1595mm in height. N12 steel dowels were provided across the holes in the web at 300mm centres. The area along the vertical joint between the two wall elements did not exhibit any significant signs of degradation after 240 minutes of exposure to the standard fire curve from one side. An FRL of -/240/240 was assigned to the joint.

Fire resistance test report FRT190130 R2.0 comprised of various service penetrations through a 1600mm wide × 1600mm high × 155mm thick Dincel structural wall vertical separating element that consisted of several polymer webs within the wall assembly. Observation of the Dincel wall at the end of the test revealed that the web joints away from the tested penetrations showed no apparent sign of degradation in the form of through gaps after 240 minutes.

Conclusion

Observations and results from the referenced test reports provide evidence that the polymer webs of Dincel walls do not burn or melt away to create holes when subjected to fire conditions. Therefore, the presence of polymer webs will not adversely affect the fire resistance performance of Dincel walls tested or otherwise assessed to achieve a particular FRL.

Kind regards

Yomal Dias
Assessment engineer
Assessments
Warringtonfire