Above 18 metres fire test

IFC and Sotech Meeting, Peterlee 03.10.2013 – Summary

Present:

John Eggington – Sotech
David Cooper – IFC
Jon Roper – Celotex
Jamie Hayes - Celotex

Fire test

• Very problematic to pass – Kingspan failed twice with standard cavity barriers.

• John at Sotech sceptical about pass with decorative cladding.

• Still no idea how Kingspan support the use of decorative cladding as their fire test uses a non combustible cladding.

• Very unlikely to pass on the basis that Celotex FR5000 is slightly better than Phenolic (according to IFC testing).

• Possible idea to design “double cavity fire barrier”:
  
  • This will consist of a steel grill with an intumescent strip as well as a traditional mineral wool cavity barrier.
  
  • Additional fire barriers may be required around openings or even vertically.
  
  • Possibility to use heavier gauge aluminium with larger panel size.

Breathable membrane

• John is not involved in breathable membranes. This is because his system uses baffled joints which greatly minimises any moisture penetration.

• Mineral wool has water resistant additives.

• K15 uses taped joints.

• Other cladding systems may use open joints or rebated joints which could allow a lot more moisture in to the system.

• Some cladding systems may have CWCT testing, some will not. Not very feasible to limit application to tested systems or systems with baffled joints.

• Breathable membrane over the face of the insulation will make it harder to pass fire test.

• Breathable membrane behind insulation board may make it harder to pass fire test, but not as bad as installing it over the face of insulation.

• It may be that the use of a breathable membrane could be added to the field of applications report. However, IFC will not commit to anything without the fire test data. Adding it behind the insulation board is a lot more likely than adding it over the face of the insulation board.
• On the basis that the fire test is going to be a close call (if we can even pass it) I think we can not rely on the field of applications report allowing a breathable membrane over the face of the insulation.

• It will be critical to consider our position on moisture and breathable membranes before finalising design.

Going Forward

• David at IFC to work on fire design.

• Estimated timescale from approved fire design to testing is 3-4 weeks.