The Building Envelope Authority

Advice Notes

28 JULY 2017

AN 01 FAÇADE SYSTEMS TESTING

NOTE:

This document has been superseded by Advice Note No 2: Aluminium Composite Material Facade Systems. It is included on the web site for reference only

Today, the DCLG released the results of the first of its six ACM (Aluminium Composite Material) cladding BS 8414 Part 1 fire tests. The test conducted at the BRE, comprising PIR (polyisocyanurate) insulation with polyethylene (PE) core ACM, failed a BR 135 assessment and the combination of these materials is therefore, deemed non-compliant with building regulations. Whilst we still await the results of the remaining five tests, it is understandable that those responsible for the safety of buildings with this type of façade will be seeking immediate advice.

Below, MCRMA sets out its guidance relating to removal of the cladding/insulation and identifying a solution for the replacement of the façade. This should be considered in conjunction with information issued by the Government via the DCLG, regarding the overall safety of the building's occupants. It is important to recognise that there are known acceptable and reasonably simple solutions. The specific course of action however, will depend on several factors.

1 Things to consider relating to removal of the cladding and/or insulation:

a) Ideally use the services of a contractor directly experienced in façade installation.

b) The quickest and most cost-effective way to re-clad a building is to make identical panels out of a similar, suitable material. Care therefore, should be taken not to damage any removed panels. Original panels should be retained, identified and referenced to their original location and orientation on the building. In the case of face fixed, flat sheet facades, a simple measurement should suffice.

In more complex situations (e.g. cassette panels) the panels may need to be returned to a manufacturer, to determine the relevant information required to make new panels.

(In an ideal scenario, the original manufacturer may still have the CNC manufacturing computer code.) If buildings have been dismantled without retaining the original panels, then a survey will be required and a new façade detailed.

c) Depending on whether the building remains occupied, the condition of the substructure and the anticipated delay in replacing the façade, a decision should be made on installing temporary weatherproofing (and, if appropriate, new insulation) as the panels are removed.

d) Similarly, if the intention is to wait for upcoming test results, MCRMA does not recommend removing the ACM cladding in isolation, as this may increase fire risk and create a falling debris hazard.

e) Detailed advice, that may be dependent on the nature of the façade and the substructure, can be obtained from the members of the MCRMA and other professionals. This would include for example, whether and for how long, the building is habitable while devoid of its cladding and insulation.

2 In identifying a solution for the replacement of the façade:

a) The building foundations, load capacity and layout of the supporting structure are only likely to be capable of carrying cladding panels of similar mass and design. Therefore, a major departure from ACM to say, terracotta tiling or brick slips, is not likely to be a straightforward or cost-effective solution.

b) PIR insulation is not ‘limited combustibility’ and therefore would need a BS 8414 certificate for use in conjunction with <u>any</u> cladding material, to comply with building regulations (or a desktop study, which is likely to be based on a certificate).

MCRMA is not aware of any certificate/study with ACM or comparable material, although this may change within the next two to three weeks as a result of upcoming test results and any information provided to us.

Therefore, at the current time, we are only aware of two straightforward, building regulation compliant solutions:

i) The only known BS 8414 compliance route combines mineral fibre insulation with Alucobond Plus. Other ACM manufacturers may soon certify their own 'FR-type' material, but without a test result or a desktop study, these do not currently comply with building regulations and should not be used as 'an equivalent'. The MCRMA would welcome details of any other products that are BS 8414 certified, and will add these to the list of known compliant materials.

ii) Depending on the architecture and finish required, there are several 'limited combustibility' routes that do not require BS 8414 certification or desktop studies. The most obvious choices all adopt A1 or mineral fibre insulation in combination with:

- A2 rated ACM (lead times and availability may be an issue)
- Solid metal such as aluminium, steel, zinc etc. (Care must be taken with this route to ensure compliance with Diagram 40 of Approved Document B, Vol 2, p95.)

c) It must be noted that adequate vertical and horizontal fire stops should be included at appropriate locations within the construction and in line with specific design advice.

d) The MCRMA web site contains the details of members who can assist in the rectification of a building, including consultants, professional advisors and manufacturers. Any of our members would be happy to recommend a reliable installer to help remove and replace your façade. All our members comply with the MCRMA charter and code of conduct, and all our manufacturers possess ISO 9001 quality accreditation.

USEFUL LINKS

https://www.gov.uk/government/news/independent-review-of-building-regulations-and-fire-safety

https://www.gov.uk/government/publications/advice-for-building-owners-large-scale-wall-system-test

©2019 MCRMA - 106 Ruskin Avenue, Rogerstone, Newport, Gwent NP10 0BD
Tel: 01633 895633 info@mcrma.co.uk www.mcrma.co.uk