



Image Credits : Express News (UK)



Devastating blaze of Grenfell Tower London

Building Claddings on “Fire”



Material selection for building envelopes often complex But yet a key decision. Having wider options of availability often right material selection requires wider knowledge.

We have been witnessing buildings with highly flammable and dangerous materials used without reviewing in details or compromises and advertently to cut cost and other commercial reasons. In these situations, building envelope suppose to provide long lasting maintenance free facades, becomes risks to occupants. Recent Grenfell tower has given unforgettable lessons to the whole world.

We continue to see similar cladding fire in several regions notably UAE / Middle East has experiences several high rise building facade fire such as Address Hotel, Torch Tower etc., However the highly devastating fire like Grenfell tower has never been witnessed by human kind. Its time for design professionals and investors/developers to deliver safer buildings.

International Standards or Regulation

-Let's see what international standards says, following extracts of few international standards illustrated here in

Singapore Fire Code (SCDF) - Clause 3.15.12 “Composite panels which consists of plastic core shall not be used for the construction internal non load bearing walls, ceilings, external walls, as cladding to external walls of all buildings .

Fire Classification - International Standards

Country	Standards	Grade	ACP compliance
Singapore	EN 13501-1	Class o	ACP mineral core- FR grade will comply
USA	ASTM E84	Class A	
UK	BS 476 Part 6 & 7	Class o	

Used at Grenfell tower



Non FR grade with Plastic core



FR grade with Mineral core



Building Claddings on “Fire”

Existing Buildings - How to Manage ?

BES team has greater knowledge on existing building fire risks, Currently our team is helping building owners having large operational assets that has flammable material and in some cases owners wish to run a safety check.

BES team has developed a risk analysis and mitigation strategy based on detailed site inspection and analyzed conditions on case to case basis. Often these risk measures are easy to implement without major disruptions to the building operations. Risk based approach involve in some cases partial replacement of cladding panels providing adequate separations lead to much lower fire hazards.



BES has rich experiences on this highly specialist field. BES strategic advises are strongly supported with technical aspects involves, R & D, material study, full scale fire testing, etc.,

Our team expertise shall bring immense values to existing building owners wishing to make their buildings safer. Team has successfully delivered these services recently.

There are several regions do not have adequate local regulations to control inappropriate use of building materials. However local regulations alone can't be relied upon for safe designs. The failures in checking and enforcing right materials, lead to severe consequences to precious life. Hence self regulated building industry, responsible designers and developers need to focus on safer buildings



Risk Matrix -

BES team adopts application based detailed risk analysis and arrive suitable mitigation measures for existing buildings, this is based on actual based with detailed site inspections by our specialists

Applications	Details	Exposure to Occupants	Risk
Wall cladding	Used with Substrate such as block or conc. wall	No interface with office spaces	Low
Wall cladding	Used on beams or columns Vertical / Horizontal	No interface with glazing	Medium
Wall cladding	Used with or without Substrate interface with glazing	Yes - exposed to occupant	High
Fins / features	Outside the main building	No exposure to occupant	Medium