

“Como a certificação com testes rigorosos de resistência ao fogo limita a propagação de incêndios em painéis termoisolantes”



Uma das maiores **seguradoras** de propriedades industriais do mundo!

1 EM CADA 3 EMPRESAS DA:



É NOSSO **SEGURADO!**

COMO O GRUPO FM GLOBAL REDUZ RISCOS?



COMO O GRUPO FM GLOBAL REDUZ RISCOS?





Certificação reconhecida internacionalmente

Orgão certificador

Organização de desenvolvimento de normas



>60,000
Approved
Products

134
Years of Service

61
Countries Manufacturing
Products

215
Product Testing
Standards

Natural Hazards Lab
•EQ Lab

Fire Protection Lab

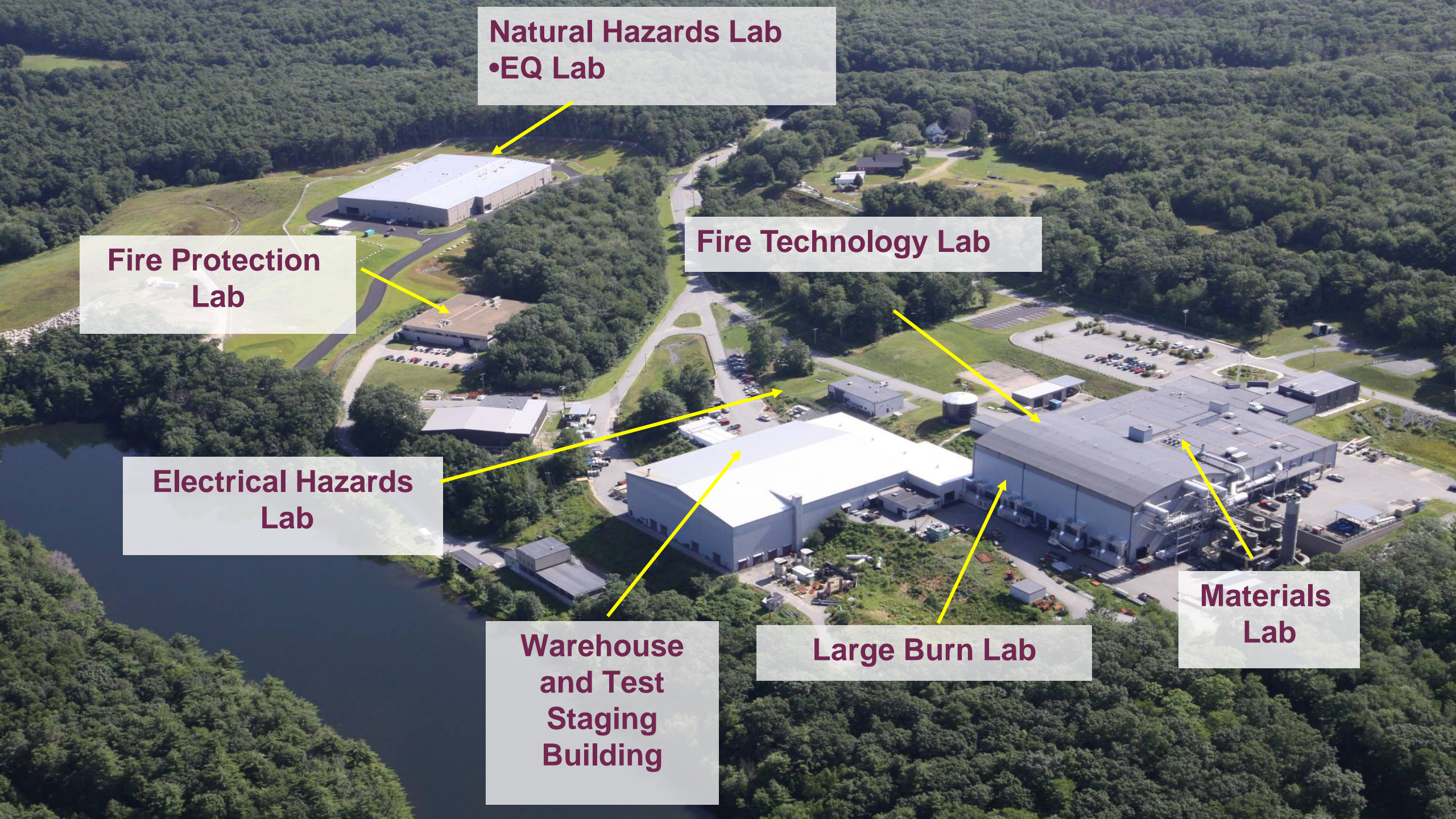
Fire Technology Lab

Electrical Hazards Lab

Warehouse and Test Staging Building

Large Burn Lab

Materials Lab





Gestão de Risco

Incêndios no Brasil

© 267.000 incêndios / ano (SENASP 2013 Ref. 2011)

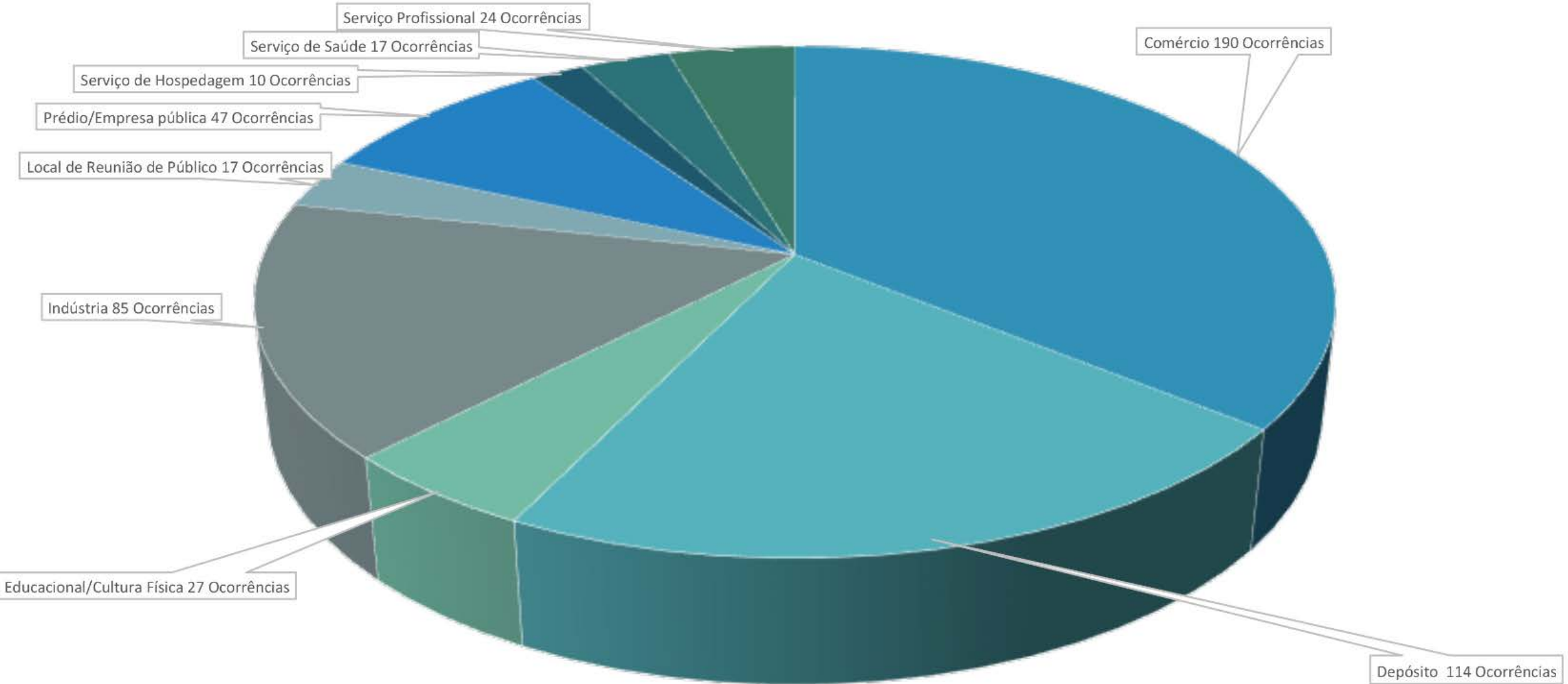


300.000 incêndios / ano

78.000 incêndios em edificações (26,00%)



Ocorrências de incêndios estruturais noticiados em 2018 - por ocupação (exceto residências)



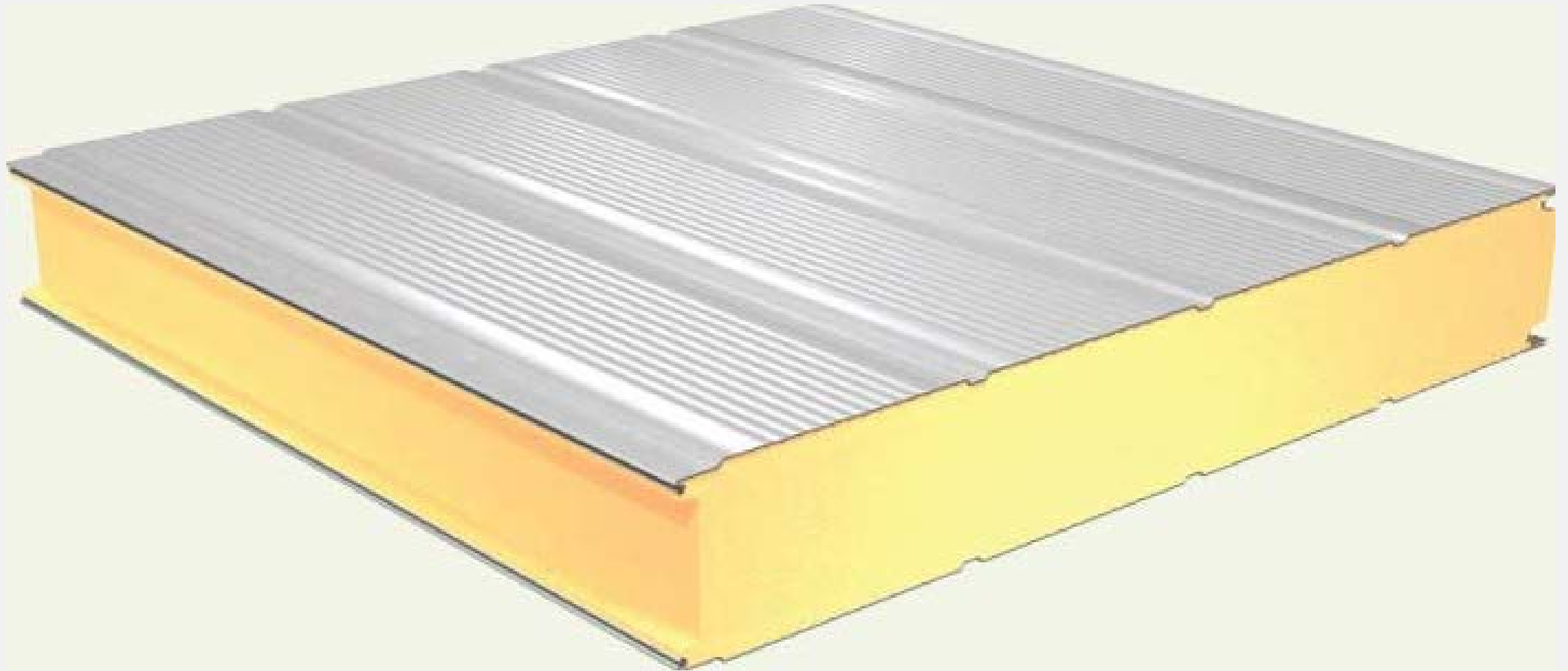
531 ocorrências

Ocorrências de incêndios estruturais noticiados em 2018 - por mês
(exceto residências)



TESTING...

Painéis Termoisolantes



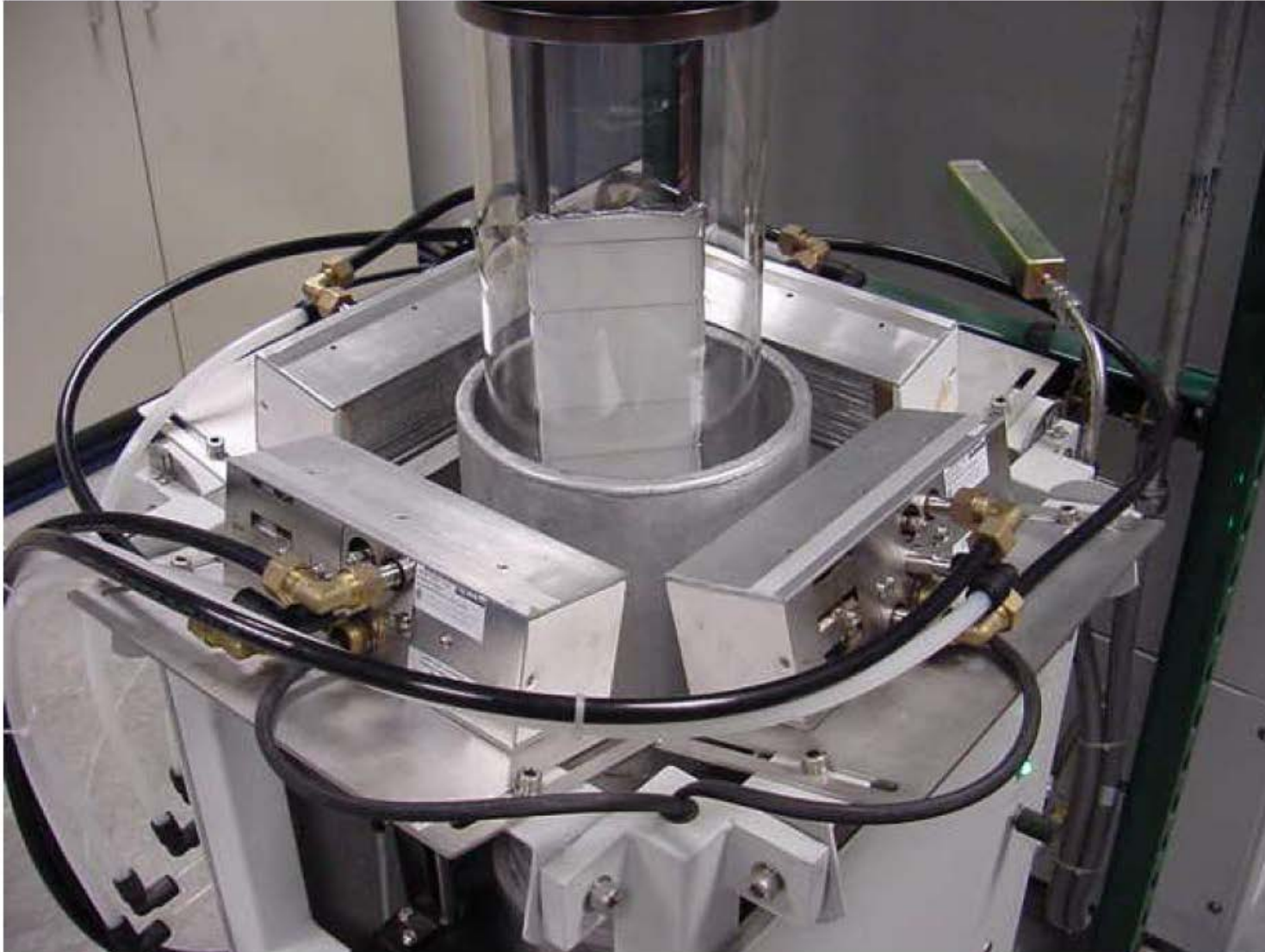
FM Approval Testing of Sandwich Panels

- *Flammability Characterization*
- *FM Approvals 25 ft (7.6 m) High Corner Test*
- *FM Approvals 50 ft (15.2 m) High Corner Test*
- *Parallel Panel Fire Test*
- *UBC 26-3 Room Fire Test or (ISO 9705 Full-Scale Room Test)*

Fire Propagation Apparatus (FPA)

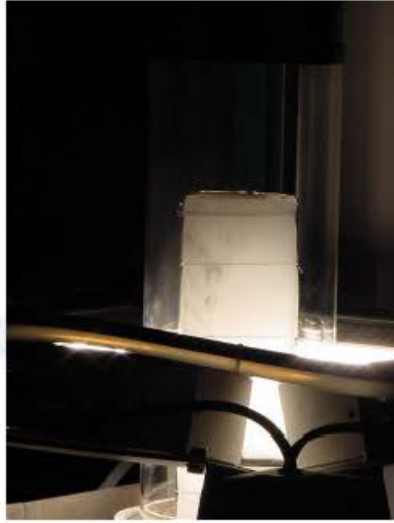


FPA Test Section (Propagation Sample)



- Fluxo de Calor Crítico de ignição
- Taxa de liberação de calor por convecção
- Calor Químico de Combustão
- Taxa de liberação calor
- Parâmetro de propagação de chama
- Calor de gaseificação
- Parâmetro de resposta térmica
- Velocidade de propagação de chama

A Propagation Test In the FPA – Also Used for Cleanrooms



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FM Approvals 50 ft (15.2 m) High Corner Test

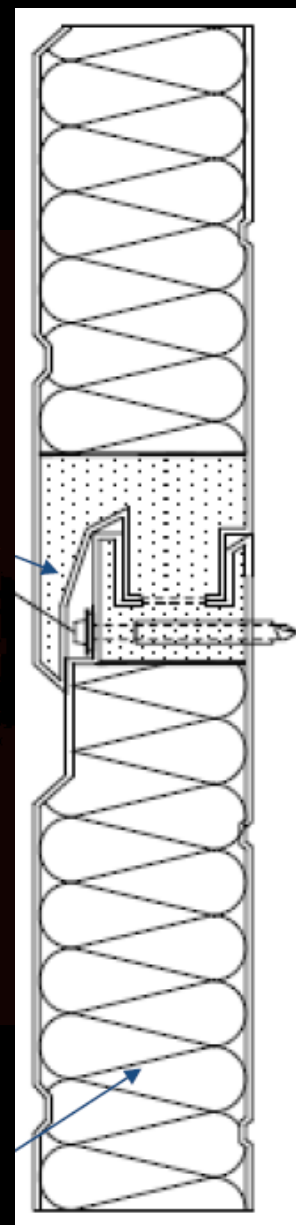
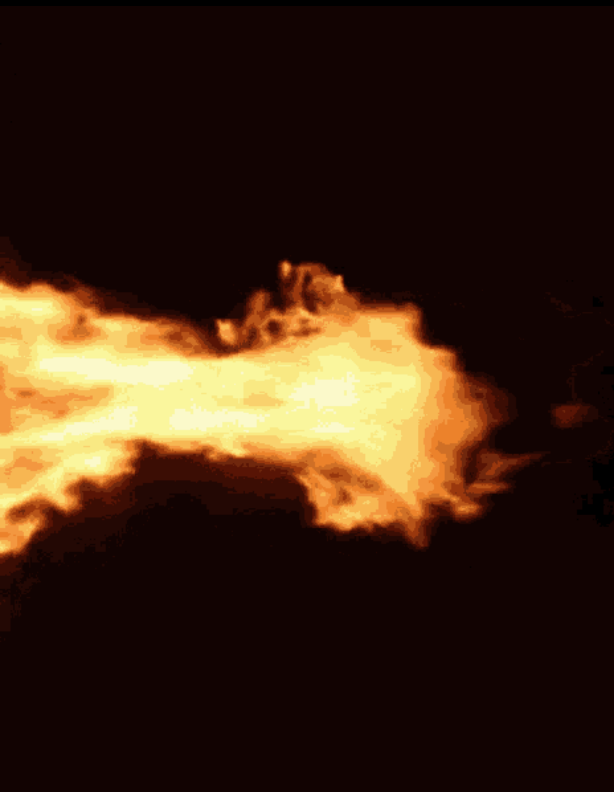


FM Approvals 50 ft (15.2 m) High Corner Test



FM Approvals 50 ft (15.2 m) High Corner Test





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Parallel Panel Test (Mid-Test)



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UBC 26-3 Room Fire Test #1



Test material installed on walls or walls and ceiling.

UBC 26-3 Room Fire Test #1



Fire grows. Crib will burn for 15 minutes.

UBC 26-3 Room Fire Test #1



Crib fully burning, temperatures can reach 1000F.

UBC 26-3 Room Fire Test #1



Fire does not propagate, flames die down.

UBC 26-3 Room Fire Test #1



After test, most of test sample material is unburned.

UBC 26-3 Room Fire Test #1



Test material meets acceptance criteria.

UBC 26-3 Room Fire Test #2



Fire ignited.

UBC 26-3 Room Fire Test #2



Fire ignites test sample material in a few seconds.

UBC 26-3 Room Fire Test #2



Fire grows very quickly (excessive fire propagation).

**Test Failure – cannot meet FM
Approval – hazardous
product/use**



Fire propagates out of control in less than 90 seconds.

“Grenfell Tower: a **tragédia** que poderia ter sido evitada”



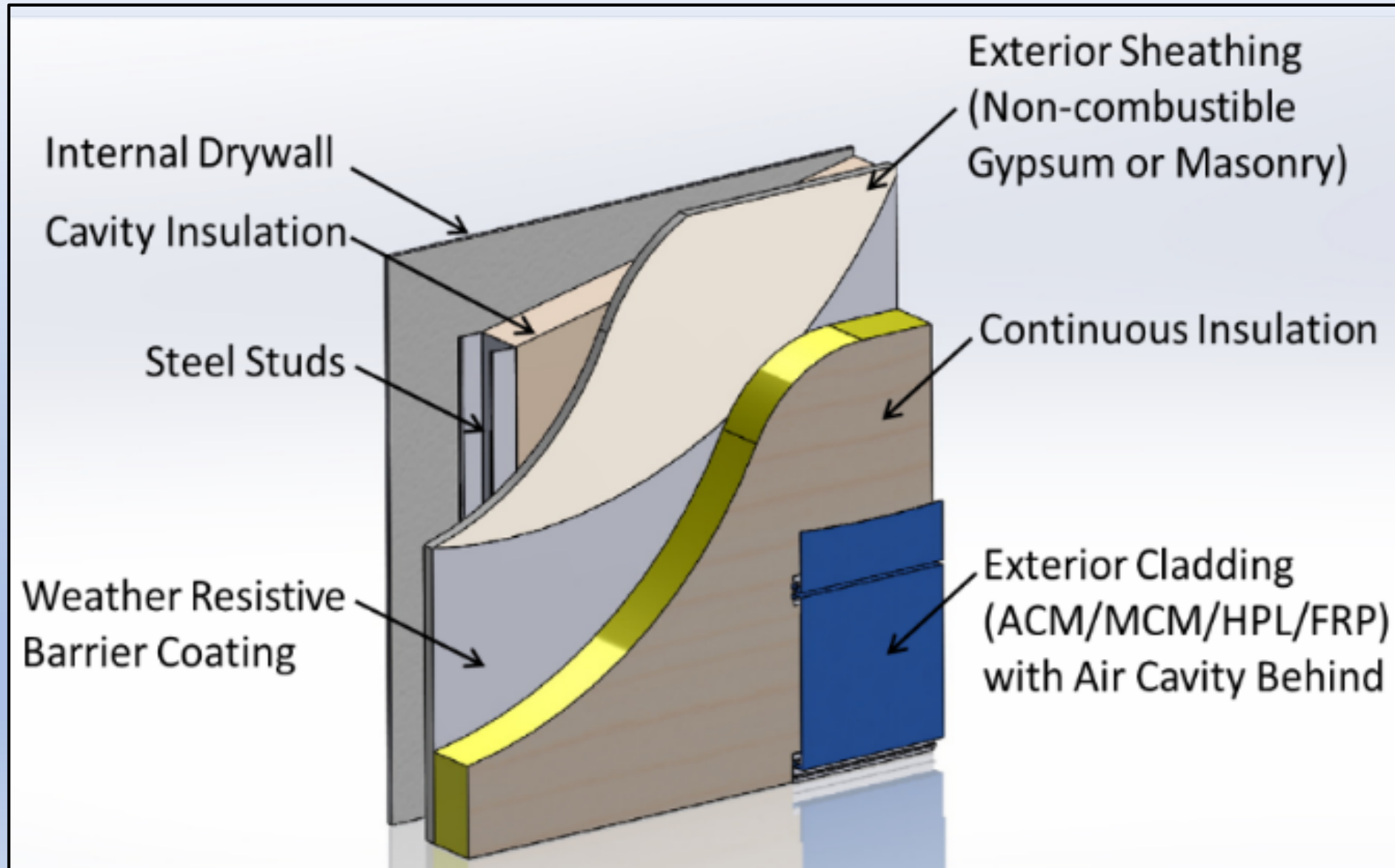
Dangerous revamp was 'reprehensible and contrary to regulations', fire inquiry told



▲ Grenfell Tower before and after refurbishment work. Photograph: Grenfell Tower Inquiry/PA




ACM: Aluminum Composite Material



NEWS

Grenfell Tower insulation 'never passed fire safety test'

21 May 2018      Share

Grenfell Tower fire



The fire ripped through the west London tower block on 14 June last year



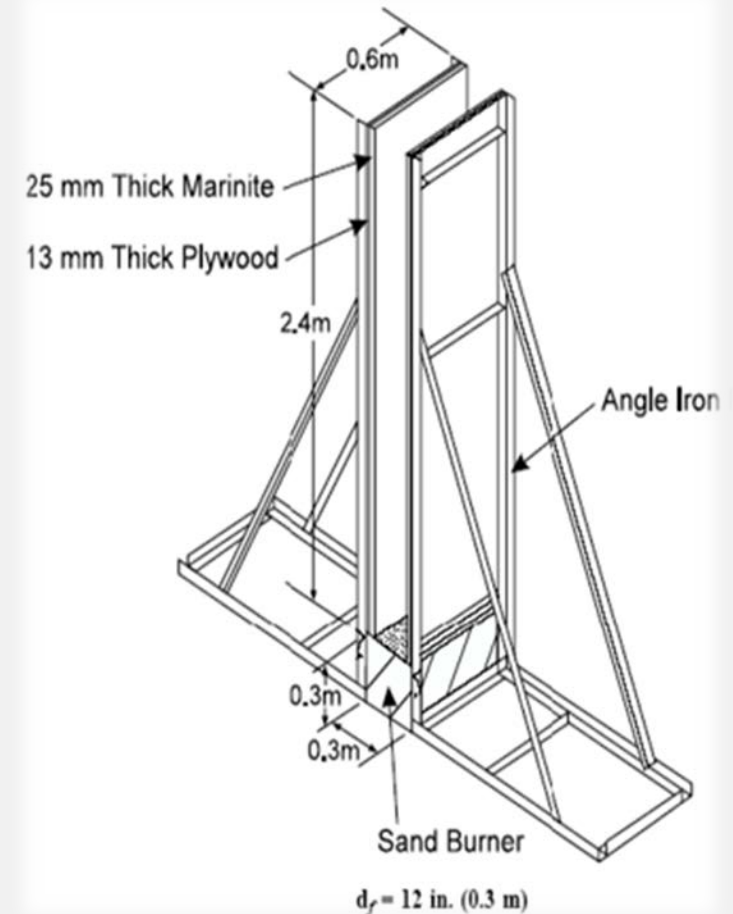
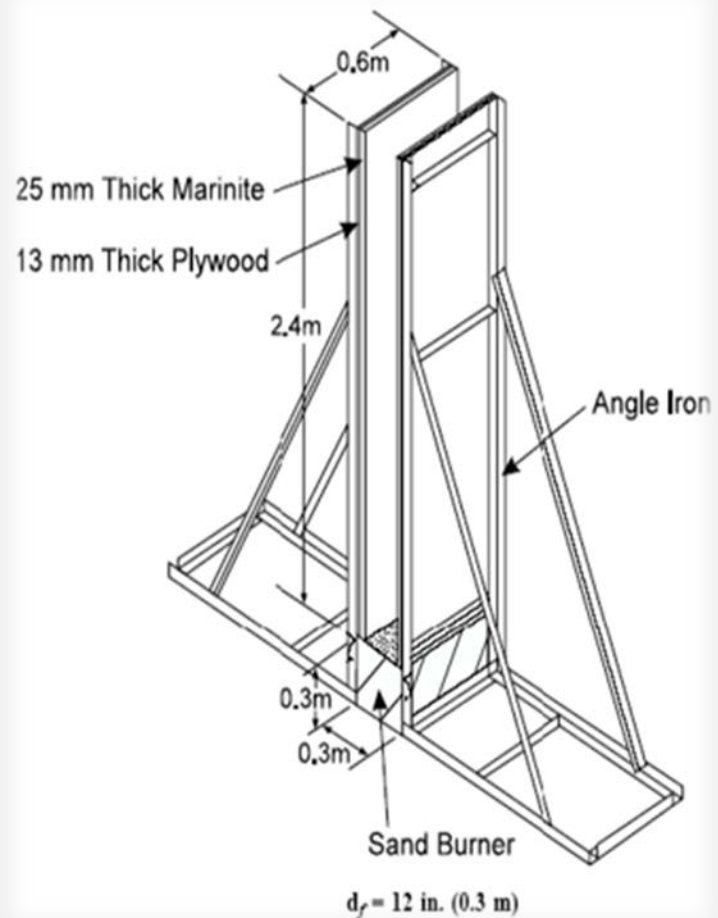
- 72 pessoas morreram!
- O fabricante disse que está cooperando com a investigação da polícia.
- Se os painéis da fachada fossem certificados, o incêndio poderia ser controlado mais rapidamente e o impacto seria menor.

**Previously Aired
On
The Discovery Channel**



Material combustível = 1 min (1/2)
Material combustível = 4 min (total)

Material NÃO combustível = 15 min



Filosofia da FM Global: a maioria das perdas pode ser evitada!

Por que a certificação é importante?



FM
APPROVED







136,950 usuários registrados

The screenshot shows the homepage of the Approval Guide website. At the top, there is a navigation bar with the 'ApprovalGuide' logo, user information (adam.houser@fmglobal.com), and links for 'Help', 'My Account', and 'Logout'. Below this is a search bar with 'Country:' and 'Certification:' dropdown menus, and a 'Search' button. A secondary search bar contains 'Division: Getting Started', 'Keyword(s):', and radio buttons for 'Product', 'Company', and 'Text'. A 'Select Book Mark' dropdown is also present. The main content area is titled 'Getting Started' and includes a welcome message and a list of search methods: Hierarchical searching, Parametric searching, Keyword searching, Text based keyword searches, Searching by country, Searching by certification type, and Searching for 'sustainable' products. It also mentions 'GREEN' and 'NEW' symbols. At the bottom, there are three image-based navigation buttons: 'Fire Protection' (with a fire sprinkler image), 'Electrical Equipment' (with a circuit board image), and 'Building Materials' (with a pipe image). The footer contains copyright information and links for 'e-mail FM Approvals', 'Conditions of Use', 'Privacy Policy', and 'About this Site'.

Merci

Danke

谢谢

Gracias

고맙습니다

Thank You

Grazie

Dank u

Σας ευχαριστούμε

ありがとう



شكرا