Façades
Beyond Glass

Timothy SOEBROTO
Meinhardt Façade Technology
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Meinhardt group, a global multi-disciplinary engineering consultancy with over 4,500 staff in 45 offices worldwide. Our global presence and international experience allow us to best service our projects across regions. Unique to MLS is our ability to offer a fully integrated and seamless design in close coordination with engineering teams, project management and planning departments, or be contracted independently.
- Transparency
- Visibility
FAÇADES BEYOND GLASS

- INTRODUCTION or BACKGROUND
- EXPLORING Alternative Materials
- EXAMINING the compatibility of the materials and building requirements
- EXECUTING the best methods
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EXPLORING Alternative Materials

- Aluminium Panel or Aluminium Composite Panel
- Stone Cladding
- Terracotta
- Glass Reinforced Polyester
- Large Size Ceramic Tiles
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ALUMINIUM PANEL OR ALUMINIUM COMPOSITE PANEL

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ALUMINIUM PANEL
ALUMINIUM COMPOSITE PANEL
ALUMINIUM PANEL
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The ADDRESS DOWNTOWN HOTEL, DUBAI
Fire Incident, New Year Eve - 2015

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THE ADDRESS DOWNTOWN HOTEL, DUBAI, UAE

Building type: 63-storey hotel (5-star)
Fire Event: 31st December 2015
Fire Duration: 4 hours
Fire Caused: Electric Short Circuit at level 14 to 15
Fire Damage:
- 14 people suffered minor injuries
- 1 people suffered moderate injuries
- Hotel closed for renovation.
- 320 US$ claim to insurance

Criticism was levelled towards the high amount of cladding implemented into the building's design; it was reported that this cladding may have contributed to the fire's spread.
The TORCH TOWER, DUBAI MARINA
1st Fire Incident, 21st February 2015
2nd Fire Incident, 4th August 2017
The Telegraph News:
The external cladding on the building was blamed for the rapid spread of the 2015 fire.

THE TORCH TOWER, DUBAI MARINA, UAE
1st fire incident

Building type: 84-storey residential

Fire Event: 21st February 2015

Fire Duration: N/A

Fire Caused: Grilled at Balconies at level 50

Fire Damage:
- 7 people suffered due to smoke inhalation.
- External cladding were burned from lv. 50 to roof.
- 101 of 757 units apartment is inhabitable and have to be renovated.
THE TORCH TOWER, DUBAI MARINA, UAE
2nd fire incident

Building type: 84-storey residential
Fire Event: 4th August 2017
Fire Duration: N/A
Fire Caused: N/A
Fire Damage:
- No injuries
- More than 40 floor are burned
HOW TO MITIGATE THE FIRE

• MATERIAL – FIRE RATED MATERIAL
• CORRECT FAÇADE DESIGN
STONE CLADDING
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STONE CLADDING

- Granite
- Marble
- Limestone
- Sandstone
- Slate
STONE CLADDING
STONE CLADDING
STONE CLADDING - TESTING

- Crushing Test
- Thermal Movement
- Compressive Test
- Flexural Strength Test
- Petrographic Examination
- Breaking Load at Hole
STONE CLADDING - FAILURE
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TERRACOTTA
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GLASS REINFORCED POLYESTER
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LARGE SIZE CERAMIC TILES
CERAMIC TILES
CERAMIC TILES
CERAMIC TILES

STUDY CASE

HOUSE of ROMAN, Jakarta

Client: Roman Ceramic
Architect: Anggara Architeam
Facade Consultant: Meinhardt Façade
Facade Contractor: Polareka Fasadindo

Facade: Ceramic Tiles by Roman, QUADRA
Fixings: Fischer
CERAMIC TILES
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Timothy SOEBROTO
Associate Director
Meinhardt Façade Technology
timothy.s@mfacade.com
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Timothy SOEBROTO
Associate Director
Meinhardt Façade Technology
timothy.s@mfacade.com

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Thank You