Tensile Facade
A New Style of Architecture
织物幕墙 - 新型的建筑表皮设计

© Zak World of Façades Hong Kong Conference

Eddy黄永
Serge Ferrari-Greater CHINA
Day Care Center, Böblingen – Germany
One piece panel+printing+transparency
• Architect: (se)arch freie Architekten BDA
• FT381
Santa Lucia Hospital, Cartagena, Spain
Façade shape echoes the background mountain
Architects-Francesc Pernas. Casa Solo Arquitectos
FT381
MI COSTA HOTEL, Turkey
Metalic feeling under sunshine
Uras + Dilekci Architects
FT381
GERMAIN PAVILLION, SHANGHAI
Event+Recycling
Architects-Schmidhuber und Kaindl, Munich
FT381
Tensile Façade benefits 织物幕墙功能

- Architectural signature  建筑外立面表现
- Thermal comfort & Energy Saving 遮阳隔热
- Visual comfort & Glare control 眩光控制及视线舒适
AIRBUS B55, Toulouse
• 3D
• Architect-Calvo Tran Van
• FT381
AIRBUS B55, Toulouse
- 3D + Transparency
- Architect-Calvo Tran Van
- FT381
Großhadern Clinic, Munich
- 3D shape
- Ludes Architekten & Ingenieure
- FT381
Großhadern Clinic, Munich
- 3D shape
- Ludes Architekten & Ingenieure
- FT381
YESHASWI Boutique hotel, Mysore

- 3D shape
- A.R. Dinesh Verma, ACE group Architects
- FT381
YESHASWI Boutique hotel, Mysore

- 3D shape
- A.R. Dinesh Verma, ACE group Architects
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VakifBank Sport Hall, Istanbul,
- 3D Shape
- FT381
Office building, Jakada

- 3D shape
- FT381
Brazilian Paralympic Center, São Paulo
• 3D shape+Transparency
• Architect- L+M Gets
• FT381
Brazilian Paralympic Center, São Paulo

- 3D shape + Transparency
- Architect: L+M Gets
- FT381
Markant Theatre, Uden – Netherlands
- Big Span backlit Panel+LED Lighting
- HH Architects
- FT381
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Luanda Multisports Pavilion, – Angola

• Frame+ LED Lighting
• Berger Arquitectors
• FT381
Luanda Multisports Pavilion, – Angola

- Frame+ LED Lighting
- Berger Arquitectors
- FT381
Vanker Sales Center, Quanzhou
• Frame+ Printing+ LED Lighting
• Huayang Architects
• FT381
Vanker Sales Center, Quanzhou
- Frame+ Printing+ LED Lighting
- Huayang Architects
- FT381
La Tour du Pin Library, Lyon
• Printing
• Charon Rampillon Architecture
• FT381
La Tour du Pin Library, Lyon
• Printing
• Charon Rampillon Architecture
• FT381
RICE University Parking Garage, Houston
- Frame+ Printing
- Architects-Kieran Timberlake
- FT381
RICE University Parking Garage, Houston
- Frame+ Printing
- Architects: Kieran Timberlake
- FT381
Style Center?

Centro Stile Italmoda, ENDINE G., Italy
Centro Stile Italmoda, ENDINE G., Italy
Renovation-Office/Showroom
FT381

The Tailor Makes The Man
What is your budget?
BAKU 2015 – SKK OLYMPIA SPORT COMPLEX ARENA

Renovation

Circular façade : 370 long x 32 m high, 118 m diameter

LIGHTWEIGHT : 360 Panels (12 x 6 m) attached to an adapted steel frame, no ground anchoring

QUICK INSTALLATION : 5 weeks – 2 crew – 6 man crews

Arch. GC : A & A
When there is no enough budget left
West Hills Medical Office, Los Angeles
- Renovation: shading + glare control + privacy
- Michael W. Folonis Architects
- Structurflex: Aluminum frame + Steel
- FT381
West Hills Medical Office, Los Angeles
• Renovation: shading + glare control + privacy
• Michael W. Folonis Architects
• Structurflex
• FT381
FACT FINDINGS (Before Renovation)

- 3 storeys office building
- Occupancy dropped
- 2 air conditioning devices running 24/7, 365 days
- Alu/textile frame solution Proposed
Sotheby’s International Realty Building, Los Angeles
• Renovation: View through + shading + glare control
• X-Ten Architects
• FT371
Sotheby’s International Realty Building,

- Renovation + View through + shading
- X-Ten Architects
- FT371
FINDINGS AFTER 10 YEARS of INSTALLATION 十年跟踪记录

- Energy savings = 60,000 US$ per year (air-conditioning)
- Occupancy rate increased
- Return on investment after 2 years
- Users’ comfort improved
- Visibility on the outside preserved
- Building’s aesthetics improved

Sotheby’s International Realty Building Façade Renovation (Los Angeles, 2005)
PRÉCONTRAINT® - Aesthetic, long life 不变形，使用寿命长

- A high-tenacity polyester weave coated under constant tension both in warp and weft throughout the whole manufacturing cycle

双向预应力技术确保织物永久不变形，使用寿命长

Precontraint fabric coating

Normal fabric coating

160μm

Precontraint fabric

Normal fabric

200 daN/m

The elongation of non-precontraint fabric could be 3 times of Precontraint fabric
Anti-mould, Easy to clean 防霉，易洁

FT 381

Conventional fabric

SOLTIS FT381
Level 0: Inert

No micro-organisms development

Piece of paper
No color fading issue (>10 years) 十年不褪色

Delta e RED : 2,6
Flame retardant: 专业阻燃，不延燃，不掉火球

FT381

Glass / PTFE

Fire retardant (B1);
Quickly burn out with less smoke (s2);
No flame dropping (d0)
Textile façade for renovation
Apolonio Morales office

Location: Barcelona
System provider: BATspain
Textile: © Serge Ferrari 381
Textile façade for renovation
Apolonio Morales office

Location:  Barcelona
System provider:  BATspain
Textile:  Serge Ferrari 381