

# LARGE MESHES

## CONCEPT



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SUSTAINABLE

RECYCLABLE

SAFE

SHADE

CREATIVE

TRANSPARENT

line  
**pro**tech

line  
**stil**tech

<b>32</b>	FILS 21	<b>156</b>	RB 45
<b>36</b>	FILS 5	<b>158</b>	RB 65
<b>40</b>	AIRPORT	<b>160</b>	RB 75
<b>44</b>	PRIVACY	<b>162</b>	RB 85
<b>48</b>	ESEDRA	<b>164</b>	TAU 40
<b>52</b>	IDEA	<b>166</b>	TAU 60
<b>56</b>	GATE	<b>168</b>	TAU 70
<b>60</b>	RESERVE	<b>170</b>	KD 400
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<b>96</b>	SIERRA	<b>188</b>	COUNTRY
<b>100</b>	PRISMA	<b>190</b>	URBAN
<b>104</b>	STADIUM		
<b>108</b>	COLISEUM	<b>192</b>	LEGENDA
<b>112</b>	PHOENIX	<b>194</b>	MODULARITY
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<b>120</b>	ESTESA	<b>198</b>	COLOUR EFFECT
<b>124</b>	VELA 300		
<b>128</b>	MERIDIANA*		
<b>132</b>	LUNA 400*		
<b>136</b>	ITALY*		
<b>140</b>	EF 400*		
<b>144</b>	EF 400/1*		
<b>148</b>	OPERA 400*		
<b>152</b>	ELLISSE 400*		

\*ULTRA LIMITES



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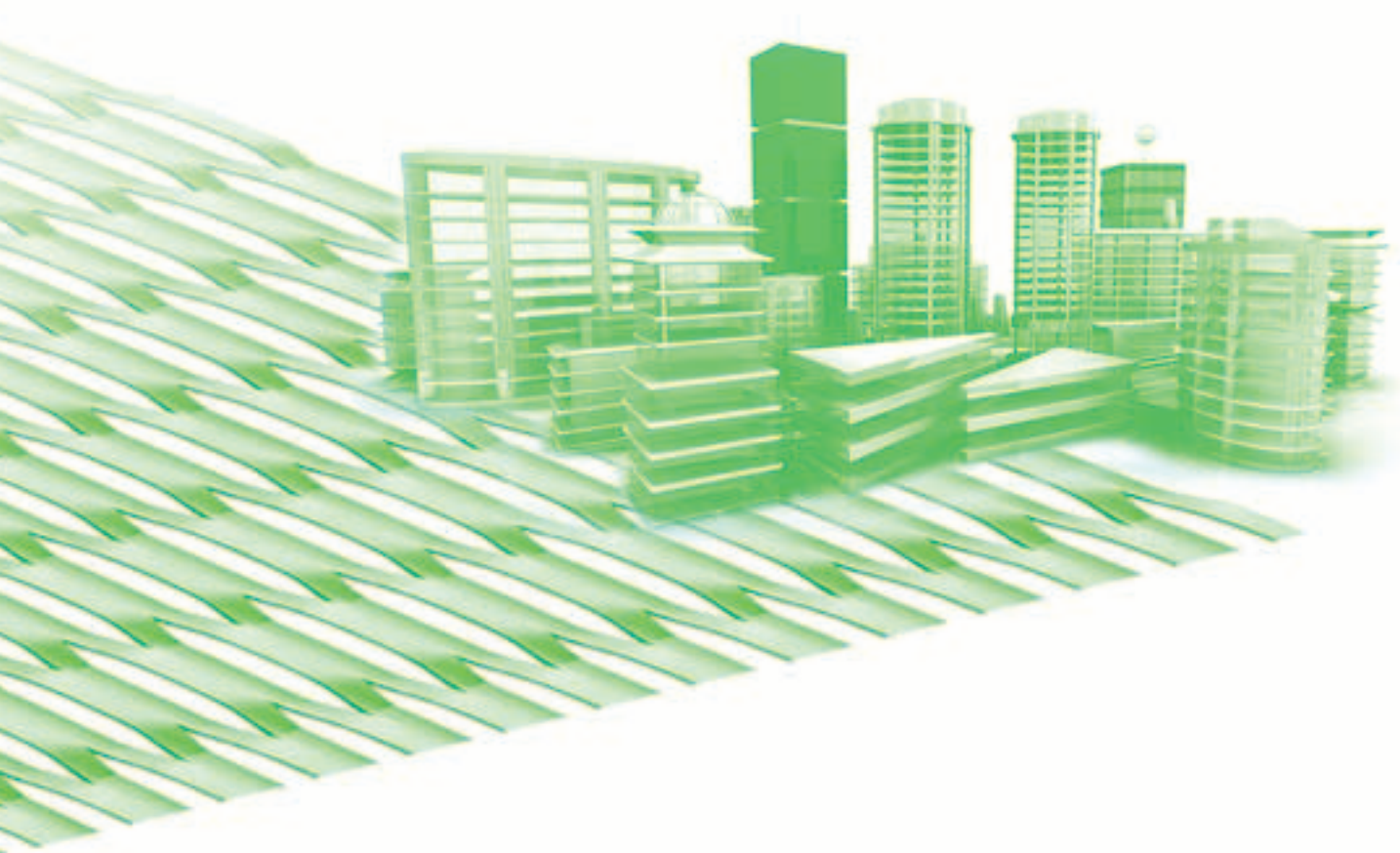
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# PROTECTION SUSTAINABILITY RECYCLING AESTHETIC QUALITY

More and more in modern architecture, environmental impact and safety-related aspects are rightfully being considered as essential. The choice of facing materials now involves combining indispensable aesthetic needs with requisites of eco-compatibility and energy efficiency.

With its proposals of expanded mesh, the Longhi Group offers architects and designers an excellent material for ecologically sustainable style.

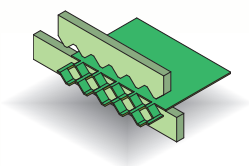






**Green energy**

70% of the energy required for production comes from photovoltaic systems.



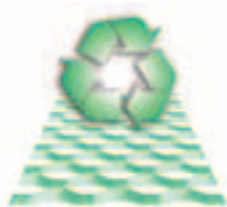
**Pollution-free process**

“Expanding” is a cold-pressing process that does not require the use of pollutants.



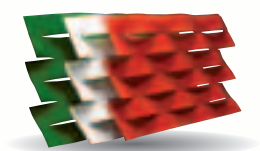
**Zero-scrap processing**

Expanded metal is produced without any work scrap with the optimized use of raw materials.



**Recyclable**

At the end of its long working life, expanded metal is subjected to differentiated waste collection for 100% recycling.



**100% Made in Italy**

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**Ecologically-sustainable material**

Longhi Group expanded metal keeps growing greener and greener! Constant commitment to limiting environmental impact in all processes through the responsible use of resources, differentiated waste collection and recycling, and keeping energy consumption low permits production in equilibrium with the environment.

**Corporate responsibility**

All production takes place in Italy; personnel are protected by law. Workplaces are monitored, safe, and scrupulously comply with all the regulations in force.



### **Wellness through natural light**

With the comfort of natural light, human productivity increases. In schools, offices, and workplaces in general. Daylight brings another important benefit: reduced need for artificial illumination. Brightness can be adjusted using sliding awnings.



### **Natural environment and landscape**

The transparency of expanded metal provides a view of the landscape and a more comfortable feeling. The natural environment is often sacrificed in the city, and this is the reason behind “vertical green” solutions and the way expanded mesh creates a metal trellis for climbing plants, for example.

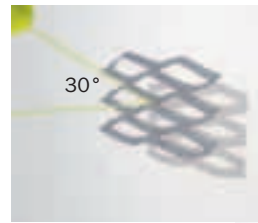
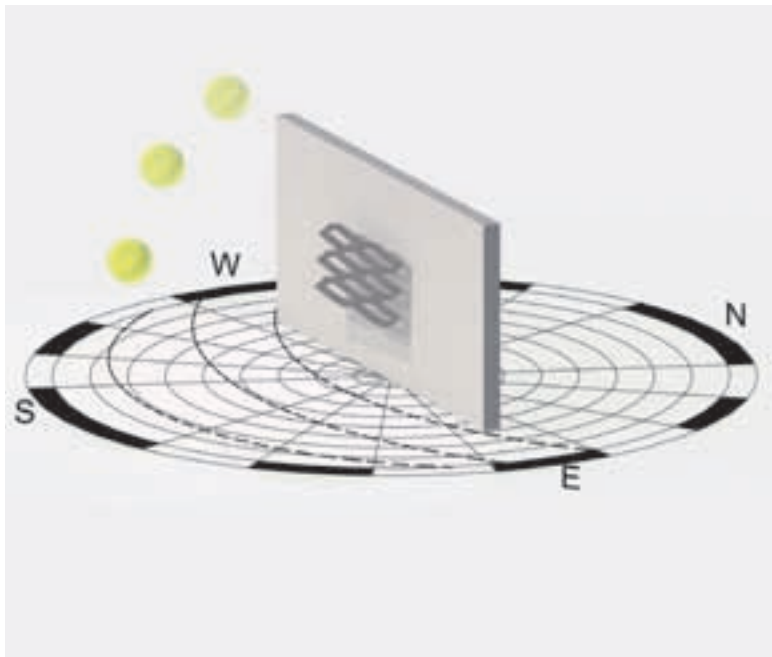


### **Energy savings and design**

“Intelligent shade” limits the passage of heat and reduces the need for air-conditioning in the warmer months. The wide range of mesh available to the advantage of design also improves the building’s energy performance.

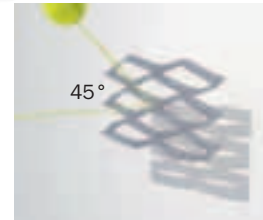
*(thanks to the kindly granting of the “WALLUP” system)*





**The study of light through expanded mesh**

Sunlight depends on geographical position, the way the façade faces, the season, and the time of day.



Each type of mesh provides its own distinctive shading at every angle.

**THE ADVANTAGES OF SOLAR CONTROL**

**Wellbeing and efficiency**

Expanded mesh is a unique material that is both transparent and provides shading at the same time thanks to its particular three-dimensional conformation.

This characteristic permits the creation of innovative screening for the regulation of daylight: the shade provided is greatest when the sun is at its highest, while the frontal opening of the mesh maximizes the amount of daylight and leaves the view open to the world outside. This makes rooms brighter and cooler at the same time.

**Designing sustainable, energy-efficient buildings.**  
**By better control of the inflow of the energy through the facing provided for the façade, for example.**





### The safety objective

When the right techniques are used for fastening to the substructure, expanded metal panels provide guaranteed safety in every type of use and applied. This suspended parapet gives the sensation of solid protection thanks to the sturdiness of the material.

These safe and practical solutions are ideal for:

- protecting people
- isolating dangers
- preventing risks

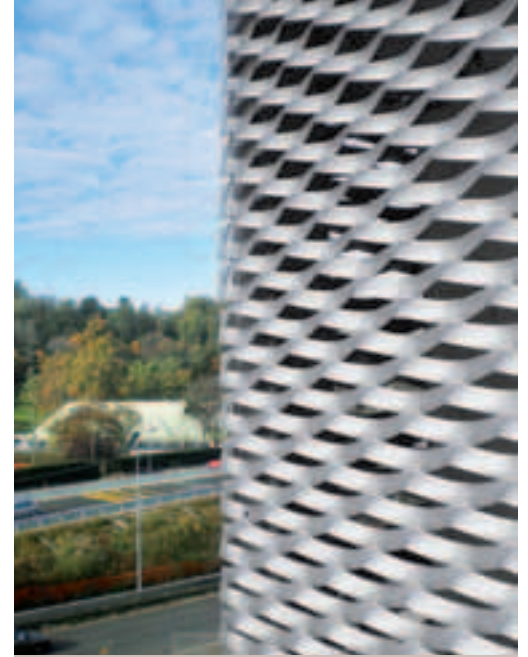


### Load-bearing capacity in compliance with standards

Load-bearing capacities for walkable surfaces are certified to the Technical Construction Standard NTC2008. Adequate protection is also provided for the respective stairs.

### Anti-slip grating

Grating guarantees excellent non-slip results documented by the certification tests specified by DIN 51130 Standard and are also anti panic function.



### Aesthetic finish and durability

Long experience with architects and architecture has helped Longhi Group develop anodizing, paint treatment, and coating solutions with exceptionally high aesthetic quality and practicality. An infinite range of colours provides creative and decorative possibilities suited to the protection of the materials used against corrosion, such as aluminium or carbon steel.







## THE DESIGN REQUISITES

### Strength and durability

The expanded metal used in construction and architecture is sized to resist the strain typical of such structures, such as the work loads, wind, and snow loads, for example.

(With regard to the general safety criteria specified in the Building Code.)

The open shape of expanded metal also makes it suited to applications that require ventilation and the free passage of air, such as in parking facilities, utility rooms or transit areas.

**The wellbeing  
of human beings  
and especially  
their safety is the  
primary objective  
of architectural design  
that complies with  
all the regulations  
in the sector.**





DESIGN AESTHETICS COLOUR LIGHT TRANSPARENCY PERS



**COMMUNICATING WITH MESH**

**The language of spaces and surfaces, volumes and proportions, colours and transparencies.**

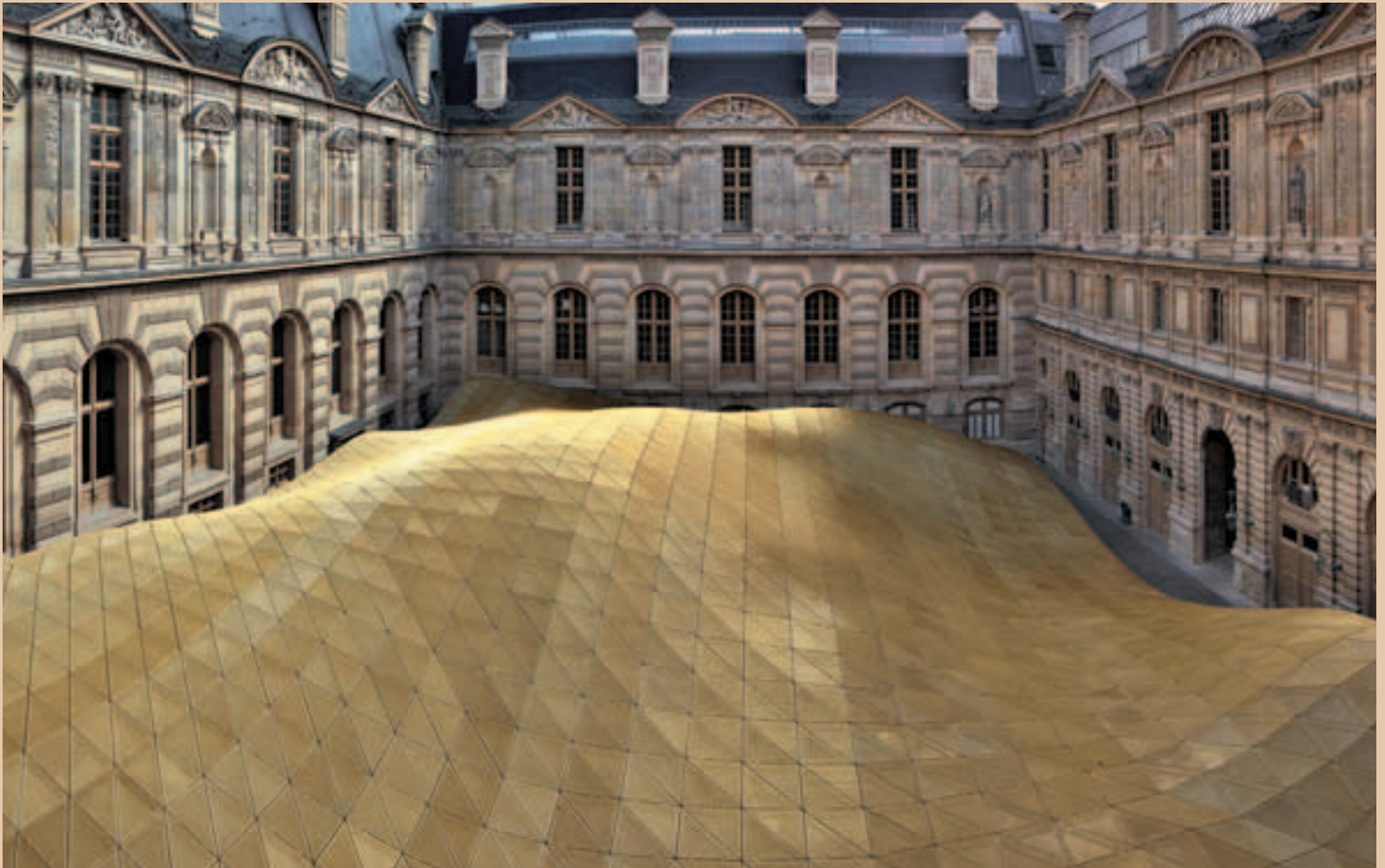
**“MESH EXPERIENCE”**

**The versatility of expanded mesh is illustrated in the impressive applications around the world on the pages below.**

SET “METAL SHOW”  
 ELLE DECOR ITALIA MAGAZINE - OCTOBER 2013  
 Styling: Ravaiolisenzistudio  
 Photo: Gionata Xerra, courtesy of Elle Decor Italia  
 Structure in expanded metal:  
 DELTASYSTEM INTERNATIONAL



PECTIVE IN MOVEMENT ARCHITECTURAL LIGHTING CREATIVITY



LOUVRE MUSEUM – ISLAMIC ART DEPARTMENT – PARIS (France)  
Design: Studio Bellini, Rudy Ricciotti  
Expanded metal cladding: METALLTECH  
Photo: © Albert Greenwood, courtesy of the Louvre

© Raffaele Cipolletta, courtesy of Mario Bellini Architects



This fluctuating, undulating semi-transparent surface was developed to permit the complementary coexistence of distinctive forms of Islamic art with the Museum's classical 18th century ambience.



The elements vault certified characteristics of materials and surface finishes, and mechanical resistance to the wind and snow loads.



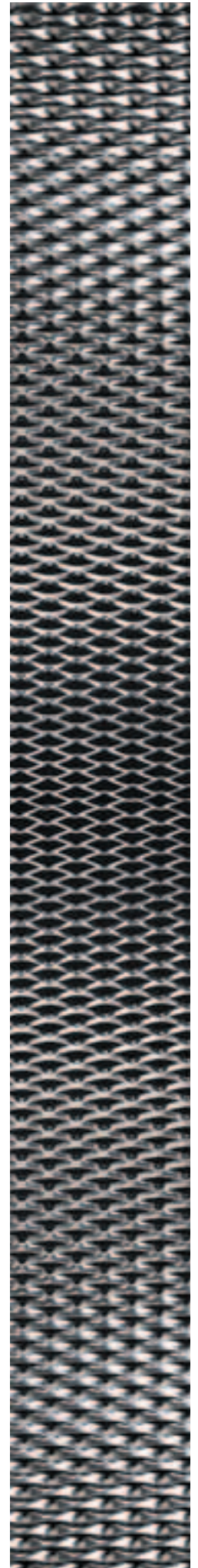
© Louvre Museum

© Metalltech archives



Combination of metal + glass + metal for the creation of a sunscreen with calibrated protection that filters the daylight passing through.

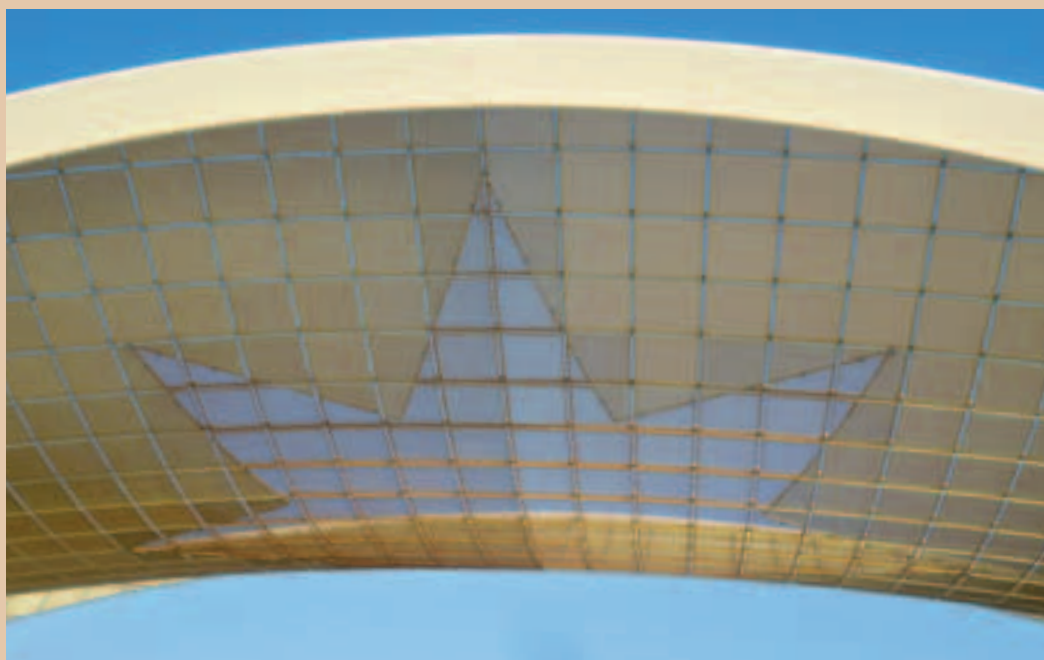
NAI - NEDERLANDS  
ARCHITECTUURINSTITUUT  
ROTTERDAM (Holland)  
Design: JO COENEN & Co  
ARCHITECTEN  
Expanded metal  
cladding: METALLTECH  
Photo: © NAI press image  
galleries NAI building,  
Carel van Hees



Façade in expanded metal with variable aperture mesh. Efficient sunscreen and graduated transparency that permits the adjustment of sunlight striking the glass walls.



HEYDAR ALIYEV INTERNATIONAL AIRPORT ENTRANCE - BAKU (Azerbaijan)  
Design of architecture and structures: ARUP - Arch. FREAD DEACON  
Constructive design of metal structures: WAAGNER BIRO (Stahlbau)  
Expanded metal cladding: METALLTECH  
Photo: © Arup



Combination of two meshes of different transparency that permits the reading of the Azerbaijan star. Inside the star, Coliseum mesh texture; outside the star, Academy mesh in pale gold tones.



AZUR ARENA - ANTIBES (France)  
Design: FRADIN WECK ARCHITECTURE, AUER + WEBER + ASSOZIIERTE  
Photo: © Aldo Amoretti

© Longhigroup archives



Multi-purpose “Palais des sports” designed for sports competitions, performances and events. At night, the windowed inserts appear as bands of light that light up the façade and symbolize dynamic sports activity.





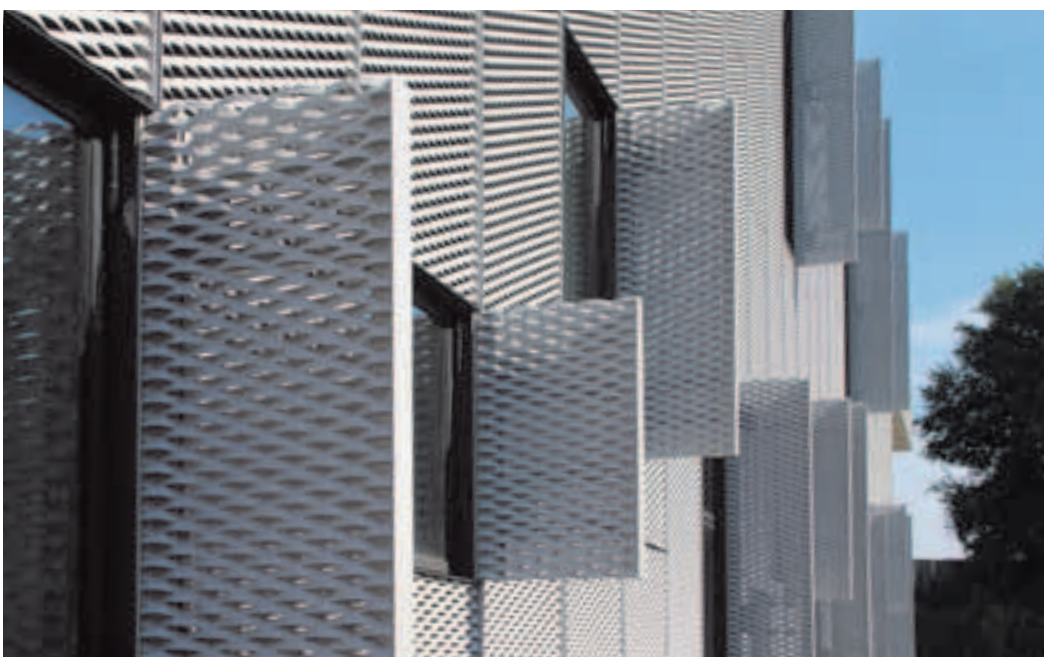
NEW PAPA GIOVANNI XXIII HOSPITAL - BERGAMO (Italy)  
Design: Studio Arch. TRAVERSI+TRAVERSI  
Expanded metal cladding: METALLTECH  
Photo: © Longhigroup archives



Facing in expanded mesh ensures the passage of air required for multi-storey parking facilities and visually lightens the impact of the not inconsiderable volume with transparency.



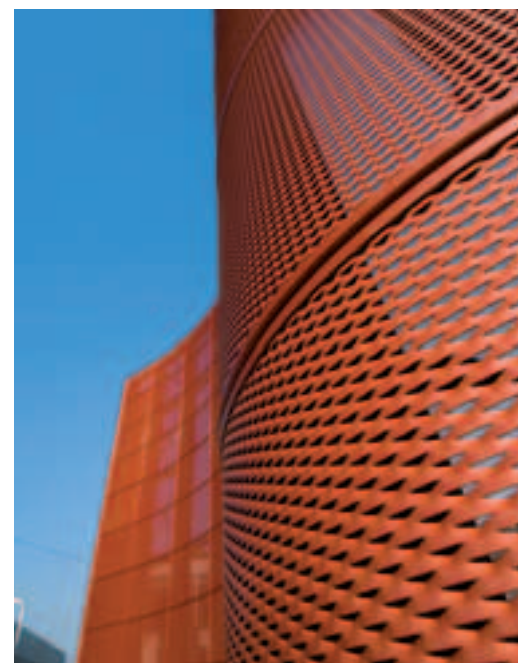
INCUBATORE DELL'ARTE - MILAN (Italy)  
Design: Stefano Boeri, Gianandrea Barreca, Giovanni La Varra  
Expanded metal cladding: DELTASYSTEM INTERNATIONAL  
Photo: © Longhigroup archives



Vertical enclosure of the building, horizontal false ceiling, lateral “fins” as sunscreen for the windows to achieve the dual objective of facing and providing shade.



LAFER BRENDOLA COMPANY HEAD OFFICE - VICENZA (Italy)  
Design: Arch. Roberto Persello  
Photo: © Roberto Persello



This fluid and dynamic stage setting was created using expanded metal panels in a global restructuring project that highlighted the office block and harmonized the entire façade.



GH GENHELIX BIOPHARMACEUTICAL FACILITIES - LEÓN (Spain)  
Design: Esaú Acosta, Mauro Gil-Fournier, Miguel Jaenicke, estudiosic  
Photo: © Esaú Acosta



Long, straight semi-circular columns in expanded metal provide the façade with transparency and movement. The letters and numbers are perceived during movement by passengers on the high speed train.



RESIDENZA RÖSSLIGUT - AARAU (SWITZERLAND)  
Design: Schneider & Schneider, Aarau  
Photo: © Erich Niederberger

This private home with a façade in expanded metal is a very distinctive building in the neighborhood.



SEA ARTS HOTEL CAMOGLI - IMPERIA (Italy)  
Design: Studio Gosplan  
Expanded metal cladding: DELTASYSTEM INTERNATIONAL  
Photo: © Anna Positano



This “green façade” provided with flower boxes on different levels positioned in front of the entrance but at a slight distance from it gives greater personality to the main façade. The building’s glass walls reflect the “green façade” and multiply it through a mirror effect in a play of reflection and transparency.



WOHNÜBERBAUUNG ROTSEEPARK - LUZERNE (Switzerland)  
Design: Rigert + Bisang Architekten  
Photo: © André Huber



The sliding sunscreen installed as a part of a parapet can be positioned as required and guarantee visual comfort and optimum thermal performance.



WALKWAY OVER STREAM IN PARCO DEL GIGANTE - BERGAMO (Italy)  
Design: Arch. Gualtiero Oberti  
Photo: © Arch. Gualtiero Oberti

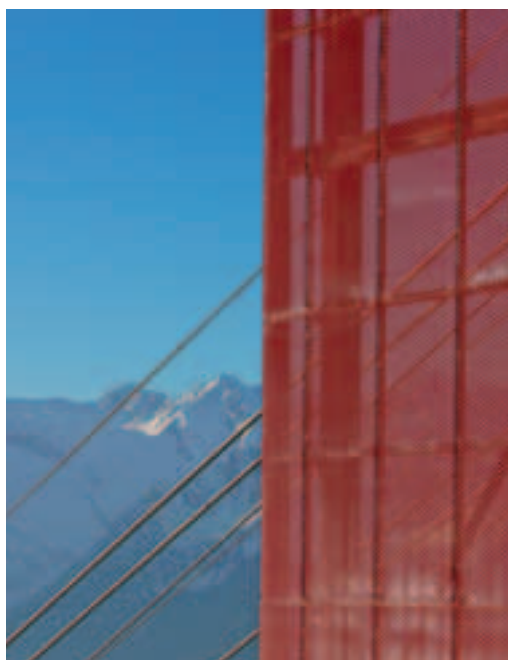


A technical and contemporary pathway perfectly immersed in the wild, the bridge over the Bragazzo Stream in Luzzana symbolizes the union of opposites in the achievement of safety.



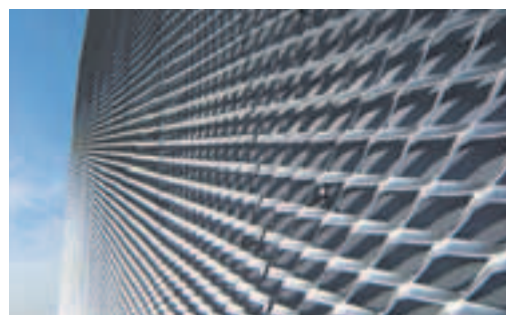


IVIGNA MERANO 2000 CABLE CAR STATIONS - BOLZANO (Italy)  
Design: Arch. Roland Baldi  
Photo: © Meran 2000 - Frieder Blicke



The station enclosure and its utility rooms faced in red lacquered expanded metal ensure ventilation in the rooms while providing protection against the weather and adequate illumination for the boarding platforms at the same time.

NUUK CENTER  
GREENLAND  
(Denmark)  
Design:  
Arch. MT Højgaard  
Expanded metal  
cladding: METALLTECH  
Photo:  
© Longhigroup archives



Its sloping lines and matte white façades recall the snow, icebergs, and the surface of the water in Nuuk Fjord.

VERONA FORUM  
VERONA (Italy)  
Design:  
Arch. Mario Bellini  
Expanded metal  
cladding: METALLTECH  
Photo:  
© Studio Diecidodici



Inspiration drawn from the world of crystals with bird- and cloud-shaped "rips".

PERFORMING ARTS  
CENTER  
FOLKESTONE (England)  
Design:  
Alison Brooks Architects  
Photo:  
© Longhigroup archives



The shaped of a fluted shell typical of the largest mollusk found along the Folkestone coast and a symbol of the sea's abundance was chosen as the main theme of the building's architecture. The exterior, lit up at night, may also be interpreted as a sculpted shield, as a drop-curtain or as a sequence of rippling waves.





EDHEC BUSINESS SCHOOL - LILLE (France)  
Design: Zig-Zag Architecture  
Photo: © Julien Lanoo



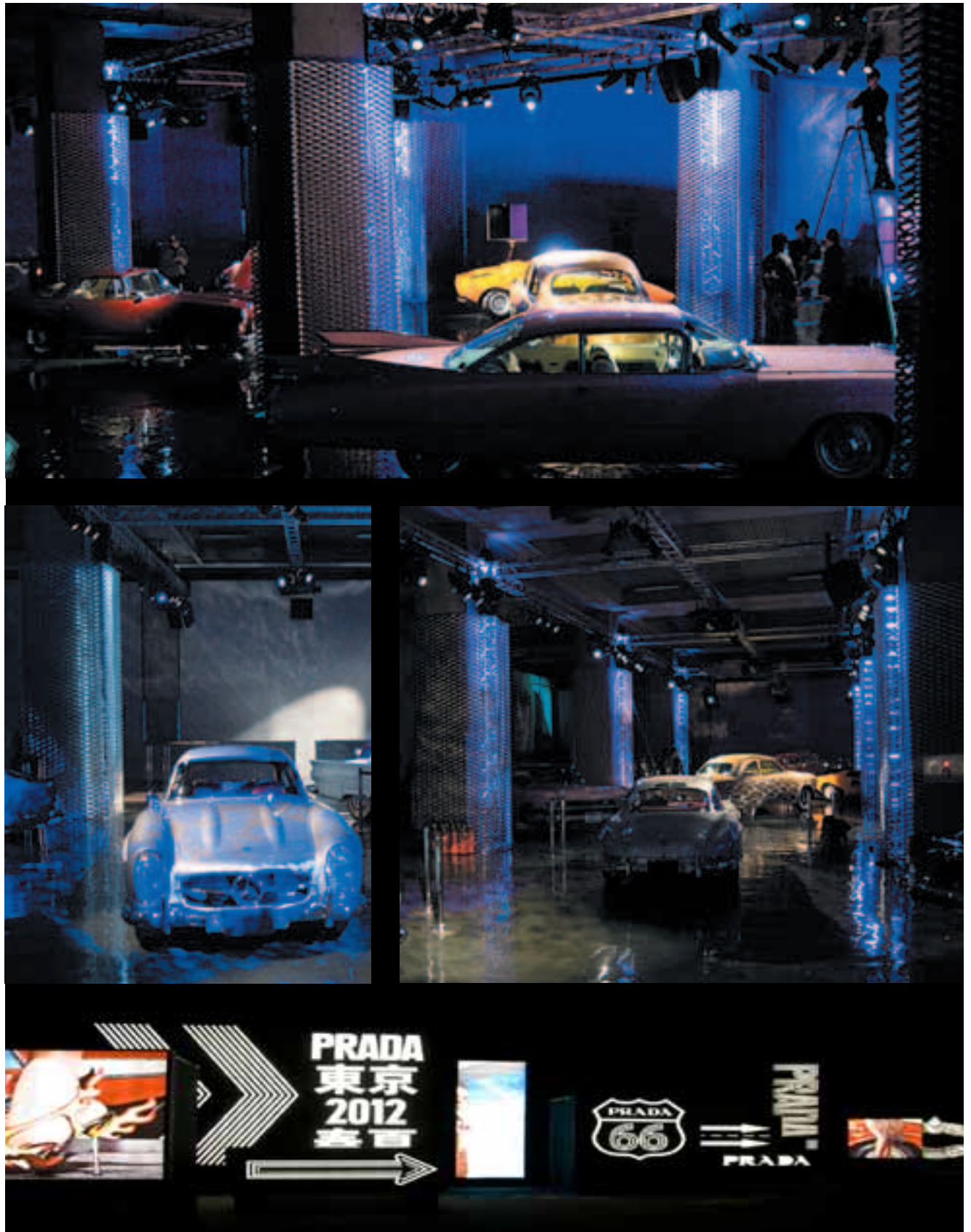
Façade as enclosure at the Croix-Roubaix University campus with large, gold-colored panels positioned at alternating inclination in order to provide movement and luminous reflection to the surface.

H&M STORE - HAMBURG (Germany)  
Design: Patricia Urquiola  
Expanded metal cladding: DELTASYSTEM INTERNATIONAL  
Photo: © Longhigroup archives



A complete expanded metal look for the restructuring of the H&M Store in Hamburg. Display window in light white mesh with logo in clear sight, projecting false ceiling that houses the lighting fixtures, shop-in-shop set-ups and backlit columns.

PRADA FASHION SHOW – TOKYO (Japan)  
Design: Prada Engineering  
Expanded metal cladding: DELTASYSTEM INTERNATIONAL  
Photo: courtesy of Prada



Architectural lighting in expanded metal for a PRADA fashion event in Tokyo outfitted with vintage cars.



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