FOCUS ON ZINC
INTERNATIONAL CREATIONS IN VM ZINC® N° 8

Ship of the desert (USA), pages 14/15
Editorial

One of the major challenges for all manufacturers today is to have an approach that is both local and global. This approach can best be defined by the phrase "think global, act local".

Our mission is to ensure the development of the zinc market in the building applications we have targeted.

The sales strategy introduced by Umicore demonstrates our commitment to providing local service as part of our global approach, particularly in France. Here, each of our sales regions has a large sales team whose main role is to be close to the key players in their market, whether at the level of specifiers, contractors or distributors. This local approach is assuredly one of our main differentiation factors today.

From a global perspective and through our position as a market leader, our mission is to ensure the development of the zinc market in the building applications we have targeted, thanks to the performance of our teams in France and internationally.

FOCUS ON ZINC best demonstrates the local adaptations of our global approach. Published in over ten languages, this magazine presents projects from many countries and different continents and shows how important it is to be present throughout the world. This proximity means that everyone can benefit from experience acquired in different contexts with regard to architectural styles, innovative research, climatic constraints or installation techniques.

I hope you enjoy discovering the magnificent projects presented in the eighth edition of FOCUS ON ZINC and leave you to imagine all the hard work we have done (our local approach again!) to ensure that each of them ran smoothly, throughout the world.

Philippe DUMAS
Sales Director, France
Contents

Five facades (France) .................................................. 2

Opera on the bay (Singapore) ....................................... 4

Paris - Chicago (USA) ................................................. 6
A little corner of France transplant to a very American city.

University challenge (Germany) .................................... 8

Ready for take-off (Spain) ............................................. 9

Playing ball (Czech Rep) ............................................. 10

In the footsteps of Dinosaurs (South Korea) .................... 11
A natural last home for nature’s giants.

History meets nature (France) ...................................... 12

Ship of the Desert (USA) ........................................... 14

Black and white (Belgium) .......................................... 16

Built for posterity (France) ......................................... 17

Light and shade (Spain) ............................................. 18

Theatre on the Loire (France) ...................................... 20

Tradition and modernity (Belgium) ............................... 22
A noble material lends new grace to this grand old lady.

On track (France) ....................................................... 23

Offices on the River (Canada) ..................................... 24

Station to station (Belgium) ......................................... 26

One stop shopping! (Spain) ........................................... 28
France

**Office building**

Bureaux et siège social CRH France, Boulogne Billancourt (France)

**Architect(s):** Cabinet d'architecture et d'Ingénierie BK Concept

**Company:**
Guerreiro SARL (roofing),
STB (cladding)

**Technique(s):**
Standing seam (roofing),
Cassettes FPS (cladding)

**Aspect(s):** QUARTZ-ZINC®

**Surface:**
155 sq. m. (1,550 sq. ft) (roofing),
100 sq. m. (1,000 sq. ft) (cladding)

Five facades

For the additional storey and renovation of the north facade of their head offices in Boulogne Billancourt on the outskirts of Paris, CRH France pays homage to the city's tradition of zinc roofs. The architect therefore chose QUARTZ-ZINC® installed using the standing seam technique for the roof.

In contrast to the roof, the facade is clad in a distinctly modern finish. In order to retain the mineral/metallic aspect of the existing tiled facade, the architect selected the new VM ZINC® cassette system also in QUARTZ-ZINC®.

This met the architect's technical and aesthetic requirements as the system is lightweight and easy to install and the zinc cassettes blend in with the existing tile, wood and structural glass of the facade. The cassettes are installed using hidden fixing clips on a specially designed framework, secured to the load-bearing structure.

The new system was installed with support from the VM ZINC® technical assistance team.
Photos: Paul Kozłowski, France.
Drawing: Design Assistance Office VM ZINC®, France.
Singapore

Opera on the Bay

Because of its aesthetic qualities and its ability to stand up to the very humid climate, QUARTZ-ZINC PLUS was chosen for the roofs of the prestigious Singapore opera and theatre development.

The Waterfront is dominated by the twin glass and stainless steel domes linked by the contrasting dark grey zinc foyer roof.

The zinc is laid using the standing seam technique down the slope of the roof and canopy of the main entrance hall. The curved roof slopes gently in a series of steps, with glass fronts that gleam like the underside of waves curling shoreward. The foyer roof ends in a bullnose with its underside continuing inside the foyer to form part of the ceiling.

Standing seam was also used on the circular roofs of the Raffles Avenue entrance and the Rehearsal Hall, and on the roof of the adjoining Satay Club.

The Design Assistance Office and PRO-ZINC team worked closely with the architect and roofing company to ensure the success of this project which has already become an architectural icon in the region.
Paris – Chicago

Flanked on both sides by tower blocks in Chicago’s prestigious Gold Coast neighbourhood, this 8 storey luxury condominium building injects a new and distinctly French flavour into this architecturally diverse neighbourhood.

The curved mansard roof is punctuated by bulls-eye windows, dormers and a finial on the corner turret roof, crafted by the Ateliers d’Art Français team. The elegant stone frontage with its decorative wrought iron is a reminder of Baron Haussman’s Paris.

The Design Assistance Office contributed to the design process. The roof was custom prepared and installed with the assistance of a PRO-ZINC team from Europe.

QUARTZ-ZINC PLUS was selected for its colour, ambience and durability. The zinc was laid vertically and joined with 2.5 cm double lock standing seam to provide wind load resistance in this “windy city”.

With this architectural masterpiece, architect Lucien Lagrange has transplanted a little piece of his native France to this very American city. 

The Chicago climate varies widely from season to season and the building must withstand bitter winters and heavy snow as well as hot humid summers and heavy rainstorms.

Lucien Lagrange
Photos: Poul Kozlowski, France.
Drawing: Lucien Lagrange, USA.
University challenge

The pure lines of the new Humboldt Universität library building, that also houses a computer and communication centre, befit this building designed to store and pass on knowledge to future generations.

For the facade the architect chose a noble material, VM ZINC®, with a history going back more than a century but with its feet firmly planted in the 21st Century. Two styles of cladding were used: interlocking panels in ANTHRA-ZINC and Bermuda panels in QUARTZ-ZINC®.

The interlocking panels are mounted on an aluminium framework with a 4 cm ventilation space. The roofing company, Dieringer, produced special ventilation profiles.

The VM ZINC® team assisted at several stages of the project by providing a mock-up of window junctions, with technical drawings and technical advice.

Photos: Paul Kozlowski, France.
Ready for take-off

The new Malaga Airport control tower soars skywards like an eagle rising from its nest. The roof of the multi-faceted administration building, on which the tower appears to be sitting, spreads beneath it like a series of unfolding wings.

For the roof, the architect selected a ventilated roof in QUARTZ-ZINC® laid using the standing seam technique with the seams running perpendicular to the ridge flashings.

The smooth finish of the interlocking zinc panels installed on the facade and in the interior of the building forms a pleasant contrast to the seamed roof.

This tower was designed to be THE reference for the airport and the city. The new airport control tower meets its objective safely and effectively...

Airport
Torre de control del aeropuerto, Malaga (Spain)
Architect(s): GOP Oficina de proyectos s.a., Bruce S. Fairbanks
Company: Cubiertas Muñoz, s.a.
Technique(s): Standing seam
Aspect(s): QUARTZ-ZINC®
Surface: 2,300 sq. m. (23,000 sq. ft)

Photos: Paul Kazlowski, France.
Playing ball

The Jindřichův Hradec gymnasium was designed principally for ball games. Because of its proximity to a protected historic area designated a national monument, the challenge was to design a building that would not clash with its surroundings while meeting the needs of the community.

The roof of the building is curved to allow maximum height. A convex window runs lengthways along the middle of the roof to provide additional height and allow natural light to filter into the hall below.

QUARTZ-ZINC® was chosen for its discreet appearance and durability and was installed using the double lock standing seam technique.

The Design Assistance Office and the PRO-ZINC team worked with the architect and roofing team on this project.

Photos: Paul Kozlowski, France.
Drawing: Design Assistance Office VM ZINC*, France.
In the footsteps of Dinosaurs

The new dinosaur museum housing dinosaur footprints and fossils in south-west Korea was created to preserve this national treasure for posterity. Consisting of three buildings, with distinctive shapes evoking the different creatures that roamed the area in prehistoric times, the museum is clad in QUARTZ-ZINC®.

In addition to its malleability, which allowed the installers to achieve the curves and angles required by the architect, zinc was chosen for its aspect. Its resistance to corrosion was also a deciding factor for this building designed to stand up to the region's maritime climate and to last, if not for as long as the fossils inside, certainly for many years to come.

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### Museum

Dinosaur Pavilion,
Haenam (South Korea)

**Architect(s):** HongSik Kim & SangSik Kim

**Company:** Shinanjin Roofing Co., Ltd.

Technique(s): Standing seam,
Roll cap system

**Aspect(s):** QUARTZ-ZINC®

**Surface:**
3,500 sq. m. (35,000 sq. ft)

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Photos: Taehyong CHO, Coree.
Drawing: Design Assistance Office VM ZINC®, France.
France

History meets nature

The architect of the new thermal spa in the Aveyron makes extensive use of natural wood, zinc and glass to create a building that reflects the regional mining tradition and fits into its wooded environment.

Solid wood posts and beams, wooden galleries, miniature pagodas resembling pit head buildings and twin gazebos shaped like mine hoist towers pay homage to the mines of the region. The heat-treated poplar and Douglas fir used on the building interior and exterior are complemented by light grey and copper green zinc roofs, with colours that shift like shadows in the woods below as the light changes.

The delicate leaf tracery on the glass canopy that curves around the building accentuates its marriage with its natural surroundings.

With the exception of the gazebo roofs, covered in the traditional split stone tiles of the region, the architect chose roll cap roofing in QUARTZ-ZINC® with green bicoloured zinc battens for the roofs.
Photos: Paul Kodowski, France.
Drawing: Architect Luc Demolombe, France.
USA

Ship of the Desert

The Black Rock Desert in the State of Nevada is well known for the Black Rock mountain that looms above the desert floor. The new Nevada Museum of Art in Reno reflects this desert landmark with a solid appearance broken by large expanses of glass on the lower level. The play of light and shadow on the sweeping upward curves and contrasting planar surfaces of the facade, for which the architect used several cladding techniques in ANTHRA-ZINC, echoes the ever-changing dark tones and irregular surfaces of the desert mountain range.

The corner window at the top of the museum set into the dark mass of the facade evokes the prow of a ship surging towards the future and bringing in its wake a mythic past represented by the battlement-like indentations that punctuate the top edge of the facade.

Architect Will Bruder, a firm believer in "place", has created a building which, while undeniably modern, has brought the "natural, historic and mythical" back to modern Reno.

Truly memorable buildings exploit the tension between the sensual and the intellectual, strive for the balance of the poet; and pragmatic, and search for elusive qualities, both timely and timeless.

Will Bruder

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**Museum**
Nevada Museum of Art
Donald W. Reynolds Center for the Visual Arts, Reno (USA)

**Architect(s):**
Will Bruder Architects

**Company:** Southam & Associates

**Technique(s):**
Simple lock standing seam,
Flat lock panels,
Interlocking panels

**Aspect(s):** ANTHRA-ZINC

**Surface:**
1,500 sq. m. (15,000 sq. ft)
Belgium

Black and white

Reminiscent in shape and colour of the old fashioned box cameras of our grandparents’ time, the distinctly modern new provincial museum of photography in Antwerp was designed to give maximum protection to the photographic material it contains. Its clean lines emanate strength and solidity giving it a fortress-like appearance broken only by the glass fronted entrance and service area.

The use of horizontally laid Interlocking Panels in QUARTZ-ZINC® for the building envelope gives the museum a contemporary look, in contrast to the historical aspect of its shape and contents.

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Museum

FILM-EN FOTOMUSEUM,
Antwerp (Belgium)

Architect(s): G. Baines

Company: Sani Systems – BREE

Technique(s): Interlocking panels

Aspect(s): QUARTZ-ZINC®

Surface:
1,000 sq. m. (10,000 sq. ft)

Photos: Fieke Doolhain, Belgique.
Built for Posterity

This 200 sq. m. building, set in an industrial area, was designed to house the archives of the Morbihan “département”.

QUARTZ-ZINC® Sine Wave profile cladding was chosen for its modernity and pleasing aspect. The proven durability of zinc makes it particularly suitable for the building’s purpose of preserving documents for future generations.

The play of light on the corrugated surface adds texture to the walls and complements the adjoining glass and concrete hall, resulting in architecture that is both aesthetically pleasing and functional.

The Sine Wave profile QUARTZ-ZINC® is laid horizontally on a ventilated wooden substructure.

Archives
Archives de la préfecture, Locminé (France)

Architect(s): Cabinet ARCAU - Fraud and Monnier

Company: SMAC ACERÖID

Technique(s): Sine wave profile

Aspect(s): QUARTZ-ZINC®

Surface: 200 sq. m. (2,000 sq. ft)

Photos: Paul Kozlowski, France.
Drawing: Design Assistance Office VM ZNC®, France.
Spain

Light and shade

Barcelona is renowned for its architectural diversity and the Edificio Vitalicio Seguros situated on the Gran Via, the main access road, lives up to this tradition.

The architect wanted the offices housed in the building to benefit from the exceptional Mediterranean light without blinding the drivers below with reflected light from its windows.

He achieved this by breaking up the solid lines of the facade with sloping QUARTZ-ZINC® vertically laid horizontal panels to create a balance between light and shade and give the building its own distinct personality.

The exceptional location of the building required a different approach to the facade in terms of both shape and materials...
Photos: Paul Kozlowski, France.
Drawing: Mark Fenwick, Javier Hibarren, Miguel Alvarez Trincado, Ignacio Riera and Francisco Sastre, Spain.
France

Theatre on the Loire

The architect of the new theatre in the town of Ancenis on the Loire river, has created a theatre which, while distinctly modern, pays homage to the region's traditional dark slate roofs. The vertically laid QUARTZ-ZINC® flat lock panels of the canopy that shelters the entrance foyer evoke this traditional material, as do the dark grey curves at the rear of the building.

In the foyer, the architect has placed the accent on natural materials - glass, zinc, marble, wood - and has made imaginative use of zinc on the stairway and for the zinc-clad bar.

The zinc-covered cocoon suspended at the north end of the foyer surprises visitors with its function as a stairway, which leads not only to the upper levels, but also to a glass panel offering a splendid view of the old, slate roofed convent.
Photos: Paul Kozlowski, France.
Drawing: Design Assistance Office VM ZINC®, France.
Belgium

Tradition and modernity

The Marriott Hotel in the centre of Brussels is an imposing feature of the downtown landscape. For this renovation, the architect wished to respect the city’s traditional roofing style and materials while benefiting from a modern material and modern techniques that could meet the demands of the roof design. He chose VM ZINC®, a noble material that symbolises both tradition and modernity.

The soft, matt appearance of QUARTZ-ZINC® laid using the standing seam technique, gives the roof a traditional appearance. The dormer windows and contemporary bulls-eye windows add charm to the upper rooms. 

Hotel

Hôtel Marriott, Brussels (Belgium)

Architect(s): Bernard Delwarde

Company: Brahy

Technique(s): Standing seam

Aspect(s): QUARTZ-ZINC®

Surface: 2,000 sq. m. (20,000 sq. ft)

Photos: Marc Detiffe, Beligique.
The site of the new international secondary school in Grenoble close to the railway station entrance dictated the design and materials of the building envelope. To create a buffer against noise from the railway, the corridors were protected behind a series of zinc “shields”, like so many grey sails along the edge of the railway tracks.

Natural VM ZINC® was the material chosen for the facade and roof because its metallic colour echoes the metal of the rails and its malleability lent itself to forming the curves, slopes and junctions of the facade.

The intersecting lines of the facade mirror the criss-crossing lines of the railway below, reminding us that, like the railway, the school offers a journey into new domains.

The VM ZINC® team collaborated closely with the architects on this project from specification and design assistance to technical assistance.

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**Education - School**

Cité scolaire internationale,
Grenoble (France)

**Architect(s):** Groupe 6

**Company:** Nouveau s.a.

**Technique(s):** Single and double lock standing seam

**Aspect(s):** Natural VM ZINC®

**Surface:**
- 3,000 sq. m. (30,000 sq. ft) (roofing)
- 2,500 sq. m. (25,000 sq. ft) (cladding)

*Photos: Paul Koziowski, France.
Drawing: Design Assistance Office VM ZINC®, France.*
Offices on the River

The Cité Multimédia office building, close to the St Lawrence River and downtown Montreal, is situated in an old industrial and warehouse area which is currently undergoing a metamorphosis.

The traditional dark brick of the restored building in front of the offices inspired the architect’s choice of brick and QUARTZ-ZINC® for the exterior cladding of the building and natural VM ZINC® for interior accents.

The alternating light grey flat lock panels of the facade mimic the brick facade of the adjoining building. The extensive use of glass on the lower floors and facades and the metal and glass “tower” that connects the two buildings emphasize the reflective qualities of the zinc.
Belgium

Station to station

For aesthetic reasons the architect in charge of renovating the Namur railway passenger terminus wished to retain the natural soft grey and ochre tones of the original building; for practical reasons he required a high quality roofing material that would withstand the test of time. He therefore chose VM ZINC®.

To achieve a traditional, tiled look and a surface aspect similar to that of the neighbouring buildings, the architect selected ADEKA in QUARTZ-ZINC® for the steep roof slopes.

The dome of the Wallonia Ministry of Transport, clad in ANTHRA-ZINC using the standing seam technique, can be seen in the background.

It is clear that the quality, durability and aesthetics of the VM ZINC® product, were... the basic criteria.

C. Bourgeois
Spain

One stop shopping!

Shopping Centre
Centro comercial Boya, Les (Spain)
Architect(s): Eureka Grupo HBA, s.l.
Company: Guives Girona, s.a
Technique(s):
Standing seam (roofing),
Interlocking panels (cladding)
Aspect(s): QUARTZ ZINC®
Surface:
3,100 sq. m. (31,000 sq. ft)
(roofing),
1,000 sq. m. (10,000 sq. ft)
(cladding)

Designed as two separate buildings, the new supermarket and shopping centre in the scenic Aran Valley are interconnected by their design which emphasises the alternating use of wood and glass.

For this project the architect opted for noble and natural materials that would weather naturally and blend with the surrounding landscape.

VM ZINC® interlocking panels on the walls and roof underside were installed horizontally to harmonise with the horizontal lines of the wood slats and emphasise the unity of the buildings. The Interlocking panel extending through the glass frontage to form the wall of the bar area adds to the coherence of the complex.

The project was featured in the 2002 edition of the Spanish architectural magazine “Arquitectura y Urbanismo”.

28
Photos: Paul Kołowski, France.
Drawing: Jordi Hernández, Juan Roberto Vásquez and Marc Binéfa, Spain.