



ArcelorMittal

steel design

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PROJECT SUBMISSIONS

Do you have a project using sheet steel that you would like to see in *Steel Design*? The editor welcomes submissions of completed buildings—commercial, institutional, industrial, recreational and residential—using components made from steel, including cladding, steel decking, light steel framing, steel roofing, steel doors, steel ceiling systems and steel building systems.

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COVER PHOTO:
The Bodegas Portia, Faustino Winery
PHOTOGRAPHER:
Nigel Young, Foster and Partners


ArcelorMittal

transforming
tomorrow



3 Bodegas Portia, Faustino Winery, Castilla y Leon, Spain

The building's trefoil plan expresses the three main stages of production: fermentation in steel vats; ageing in oak barrels; and maturation in bottles; at its core is an operations hub, from which all stages of the production process can be controlled.

6 Sault College Academic Building
Sault Ste. Marie, Ontario

For the modern look of the building, Robinson and his team favoured steel, which was both cost-effective and flexible enough to allow for innovative design. "Using steel allowed us to customize the panels and siding for a fresh modern look. It complemented the natural materials of stone and wood".

8 World Resources Company (WRC)
Kaohsiung City, Taiwan

Combining form and function is the inherent



challenge in creating structures that are both functional from a design perspective and aesthetically pleasing. Such was the challenge facing WRC when planning to locate a processing facility and offices in the Southern Environmental Science and Technology Park in Kaohsiung City, Taiwan.

10 Tough Challenge, Tough Product

Solano®, ArcelorMittal Dofasco's new organic coating for steel



cladding and roofing was selected as the best paint system to use on the cladding for the #4 BF Casthouse ventilator roof and walls. Solano is a non-phthalate, heavy metal-free (i.e. 'green') organic Plastisol paint finish. It is suitable for aggressive industrial applications where cladding will be subject to harsh, corrosive environments. It performs measurably better than other plastisol paint systems currently available in North America.

12 Upside Down House, Hermosa Beach, California

Architect Robert Nebolon sought out sustainable materials with high durability, low maintenance and resistance to the ravages of salty marine air, for the interior and exterior of this beach house.



14 The Last Word in Steel News

• Montecito Residence, Montecito, California • Converge 2013: When You Can't See The Forest For The Wood • SOLANO® the new generation of organic pre-finished steels for industrial buildings in harsh climates • House Twisted – Tokyo, Japan • House in the Southern Highlands – Australia.

The Bodegas Portia is a new 12,500m² (134,500 sq. ft.) winery for the Faustino Group, located in the Ribera del Duero, one of Spain's foremost wine-producing regions, with a production capacity of one million bottles per year. The building's trefoil plan expresses the three main stages of production: fermentation in steel vats, ageing in oak barrels and maturation in bottles. At its core is an operations hub, from which all stages of the production process can be controlled.



"We had no preconceptions about how it should work – it was an opportunity to start from first principles". Norman Foster



The site approximately, 150 kilometers (93 miles) north of Madrid, has extremely cold winters, as well as hot summers with limited rainfall. The deep overhang of the roof canopy provides shade and the building is designed to regulate the internal temperatures at the same time as reducing energy demand. By partly embedding the building within the landscape, its visual impact is minimized and the passive environmental benefits are maximized.



The wings containing the barrel and bottle cellars have been partly dug into the sloping site. Embedding the building in this way helps to create the most favourable conditions for the ageing process and is an essential part of a passive environmental strategy, which allows the building to exploit the thermal properties of the earth, in conjunction with the thermal mass of the concrete structure to regulate the internal climate. The concrete structure is clad in large panels of weathering steel shingles Indaten® supplied by ArcelorMittal

(Dofascoloy W in Canada), whose colour complements the natural tones of the vineyards. The roof canopy shades the glazed atria as well as the exposed vats, with plans to incorporate photovoltaic in the future.

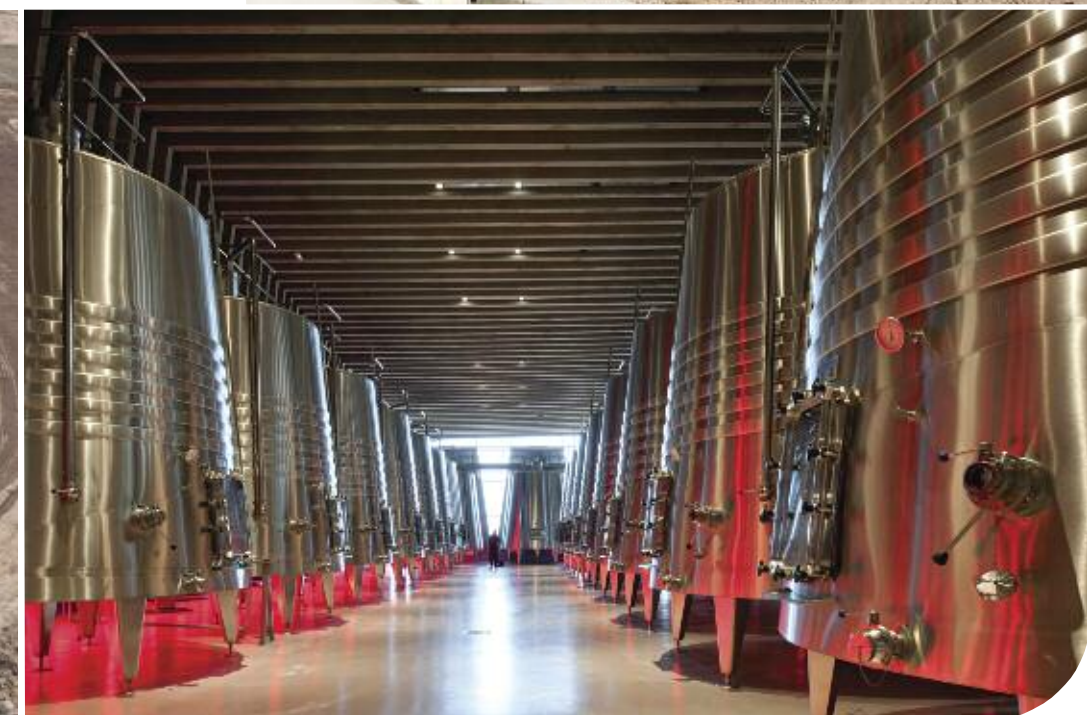
The grapes are delivered to the winery via a road that rises up on to the roof, where they are dropped directly into the hopper. By delivering the grapes this way, they flow naturally, by gravity, through the pre-processing stage and ultimately to the vats, thus preserving the natural properties of the grapes.

The Bodegas Portia Winery is the first project that Norman Foster has designed for Faustino Winery Group. The project presented the opportunity to look afresh at the winery as a building type, using the topography of the site to aid in the wine manufacturing process and to create the optimum working conditions, while reducing the building's energy demands and its impact on the landscape.

The choice of Weathering steel shingles for the exterior cladding fit perfectly with the topography.



The wings containing the barrels and bottle cellar are partly embedded into the ground to produce the most favourable environmental conditions for ageing the wine, while the fermentation wing is exposed, allowing carbon dioxide to be released naturally.



DESIGN AND CONSTRUCTION TEAM

CLIENT: Faustino SL

ARCHITECT:

Foster + Partners +44 (0) 20 7738 0455

STRUCTURAL ENGINEER:

Arup +34 (0) 91 523 9276

MECHANICAL AND ELECTRICAL ENGINEER:

Arup +34 (0) 91 523 9276

QUANTITY SURVEYOR: DLE

LIGHTING CONSULTANT:

Claude Engle 301-654-5502

PROJECT MANAGER AND LOCAL ARCHITECT:

Prointec +34 91.480.64.00

MAIN CONTRACTOR: FCC

PHOTOGRAPHY: Nigel Young, Foster and Partners



Taking their cue from the breath-taking local landscape, the team at Tillmann Ruth Robinson Architects gave a much-needed facelift to Sault Ste. Marie College. The new 6,968m² (75,000 sq. ft.) \$21M academic building was designed to blend the new with the old. The new building includes a spacious front entry and exhibit space, plus flexible classrooms for aviation. A 743m² (8,000 sq. ft.) interactive learning commons was added to provide the students with casual space to interact.

Eye-catching resourceful and innovative design



"This was the first time the college had a new building added to it in many years. It is an important gateway building for the college itself. We situated the building at the front entry. We wanted the design to reflect the college, as well as the community of Sault Ste. Marie, and its location", explains Scott Robinson, Director of Design for Tillmann Ruth Robinson. "It is a blend of contemporary and natural materials. Along with the steel cladding we used natural stone and wood to reflect the surrounding geographical area."

"Kids are hanging out in the common area. They now have a place to meet and socialize after class. It has a big impact on how students feel about the college, which is rewarding," Robinson says. "The new area provides some non-academic social spaces that aren't quite as formal

as libraries. When people say they feel good about being there, that inspires us."

The Tillmann Ruth Robinson team faced a number of obstacles – but successfully completed the project in fourteen months to finish by March 2011. "The challenges we had were a tight budget as well as a tight timeframe. We had an aggressive construction schedule," Robinson says. "We will take the architectural vocabulary we created here and use it on additional buildings on the campus."

"Not only does the new building provide great curb appeal, it is truly distinguishable as a Northern Ontario College," states Dr. Ron Common, President, Sault College, "Sustainable design elements have been included in the planning of this complex that incorporates a local flavour such as indigenous plants, wood roofing, steel cladding and copper, the latter having historical significance to First Nations people, who account for 20% of Sault College students."

For the modern look of the building, Robinson and his team favoured steel, which was both cost-effective and flexible enough to allow for innovative design. "Using steel allowed us to customize the panels and siding for a fresh modern look. It complemented the natural materials of stone and wood," he says. "The more-modern materials reflect the forward-thinking vision of the school." The pre-formed, prefinished steel cladding is 0.76mm (.0299") Z275 (G90) galvanized with the 10000 Series paint system.

As can be seen in this photograph of the Academic Building, the predominate vertical steel cladding panels are Agway Metal's HF-IINF panels, coloured Grey Berry QC3659, while the narrower vertical panels are Agway Metal's HF-15NF, coloured Pebble QC3661, all with the 10000 Series paint system. (Agway's 7-175 panel is used on the penthouse, which is not visible in this view).



The major elements of the 6,966m² (75,000 sq. ft.) academic building, include a new entry and exhibition hall, 17 state-of-the-art classrooms, aviation and natural resource laboratories, a 100 seat lecture hall, 743m² (8,000 sq. ft.) of interactive learning commons and administrative spaces. The new Academic Wing also provides much needed formal and informal social spaces and gathering places that promote casual sharing of ideas and boundary-crossing.

The design communicates forward looking architecture, while a sensitive blend of modern and traditional expression is achieved by mixing natural stone and wood with more contemporary materials of curtain wall and prefinished steel panels.

DESIGN AND CONSTRUCTION TEAM

ARCHITECT:

Tillmann Ruth Robinson 519-672-1440
with EPOH Inc. Architects and Consulting Engineers
705-949-5291

GENERAL CONTRACTOR:

Ellis Don 866-998-1387

STEEL CLADDING SUPPLIER:

Agway Metals Inc. 1-800-268-2083

LIGHT STEEL FRAMING (GIRTS AND CHANNELS)

SUPPLIER & INSTALLER:
Flynn Canada 905-671-3971

PHOTOGRAPHY:

Shai Gil Photography 416-916-1840



PREPAINED STEEL CLADDING TYPES ARE:

PMC-1: Agway HF-IINF, colour: QC3659 Grey Berry

PMC-2: Agway HF-15NF, colour: QC3661 Pebble

PMC-3: Agway 7-175, colour: QC3661 Pebble

Material is .76mm (.0299") prepainted Z275 (G90) galvanized
ASTM A653/653M Grade A

LIGHT STEEL FRAMING:

Steel subgirts ("Z" bars, angles and channels) were manufactured from Z275 (G90) galvanized sheet steel in accordance with requirements of ASTM A653M Grade A, Structural Steel Quality Grade 22 (230).

The darker vertical panels on the building are Grey Berry QC3659.

The lighter vertical panels are Pebble QC3661.



Combining form and function is the inherent challenge in creating structures that are both functional from a design perspective and aesthetically pleasing. Such was the challenge facing World Resources Company (WRC) when planning to locate a processing facility and offices in the Southern Environmental Science and Technology Park in Kaohsiung City, Taiwan. WRC is an environmental risk management company serving the technology sector.

Combining form, design and function – with steel

For more than 30 years the company has helped conserve the world's metal and mineral non-renewable resources by converting manufacturing waste and residues to commercial products. Not surprisingly, one of the company's founding principles is that each generation is the custodian, not the owner, of the world's resources and is obliged to pass on that inheritance.

Equally unsurprising, therefore, was that the facility –

a sorting and recycling plant housing laboratories and non-ferrous metal processing – needed to be a 'green' project. WRC approached USA-based SteelMaster® Buildings LLC which had worked on WRC Pacific Ltd.'s Taipei headquarters in 2006. In turn, SteelMaster®, which specializes in supplying arched, corrugated steel buildings for many and varied applications around the world, worked with Future Steel Buildings®

headquartered in Brampton, Ontario to engineer and manufacture the structure.

The eye-catching design uses both shape and colour to enhance the 771m² (8,300 sq. ft.) facility. Both Future Steel® and SteelMaster® use ArcelorMittal Dofasco exclusively to provide Galvalume Plus™ and galvanized steel for their buildings. The focal point of the WRC facility design was the roof, com-

prised of unpainted AZM180 Galvalume Plus. This material is approved by the ENERGY STAR® program for both high and low slope applications and provides high solar reflectance. The flat roof between the two arched sections holds a roof garden. The high life-cycle energy efficiency of Galvalume steel contributed to the project receiving LEED Gold certification, one of only seven such buildings in Taiwan.

WRC's sorting and recycling facility also includes an office space. Both buildings are made from 1.9mm (.075") AZM 180 Galvalume Plus, which is ENERGY STAR® rated and provides high solar reflectance. Several of the panels have been powder-coated for aesthetic value.

WRC's sorting and recycling plant, utilizes corrugated Galvalume Plus panels with structural steel I-beams that have been curved to blend with the SteelMaster structure. The beams are powder-coated yellow.

DESIGN AND CONSTRUCTION TEAM

OWNER:
World Resources
Company
703-734-9800

DESIGNER AND
MANUFACTURER:
Future Steel
Buildings Intl. Corp.
1-800-668-5111

STEEL BUILDING
DISTRIBUTOR:
SteelMaster Buildings,
LLC 1-800-387-2343



Arched unpainted corrugated 1.9mm (.075") AZM180 Galvalume Plus panels supplied by SteelMaster® Buildings.





Blast furnace casthouses are not thought of as particularly friendly places, especially if you happen to be a cladding panel. ArcelorMittal Dofasco's #4 Blast Furnace began life in 1971 and produces 4,600 net tons of hot metal a day. 'Hot metal' is a euphemism for liquid iron. The Casthouse plays a vital role. It encloses the bottom half of the blast furnace where the molten iron and slag are 'cast' and the less dense slag skimmed off. A critical link between iron ore and steel, and a challenging environment for a paint finish.

Tough Challenge, Tough Product Solano – A New Generation of Plastisol Paint Systems

DESIGN AND CONSTRUCTION TEAM

OWNER:

ArcelorMittal Dofasco

STEEL CLADDING SUPPLIER:

Agway Metals Inc.
800-268-2083

STEEL CLADDING

INSTALLER:

Lancaster Sheet Metal Ltd.
905-388-3800

Enter Solano®, ArcelorMittal Dofasco's new organic coating for steel cladding and roofing. It was selected as the best paint system to use on the cladding for the #4 BF Casthouse roof ventilator and walls.

Solano is a non-phthalate, heavy metal-free (i.e. 'green') organic Plastisol paint finish. It is suitable for aggressive industrial applications where the cladding will be subject to harsh, corrosive environments. It performs measurably better than other plastisol paint systems currently available in North America.

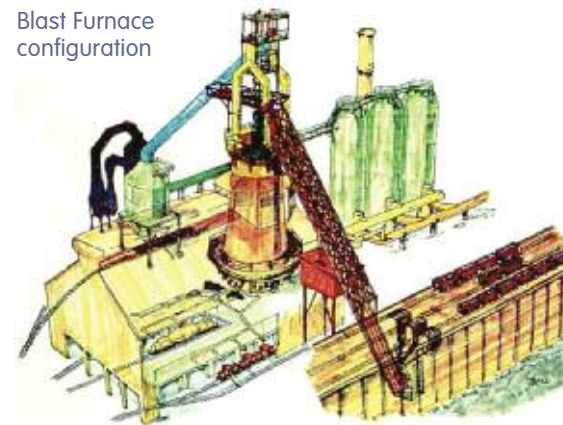
Together with its protection against corrosive atmospheric and industrial exposure, Solano is scratch and abrasion resistant – a feature helpful in downstream processing

and handling. It is applied to both AZM150 Galvalume and Z275 (G90) hot-dipped galvanize substrate. At the Casthouse it is applied to 1.22mm (0.048") thick Z275 (G90) at a coating thickness of 8 mil over 4 mil.

The Solano paint system offers a range of more than 20 colours. Tile Red was used at the Casthouse to clad the roof and sidewalls, as Solano is designed for both vertical and non-vertical applications. The Casthouse is 38.4m long x 25.6m wide x 3.65m high (126' x 84' x 12'). A total of 311m² (3,360 sq. ft.) of Solano coated steel was used to clad the walls and another 164m² (1,765 sq. ft.) to clad the roof.

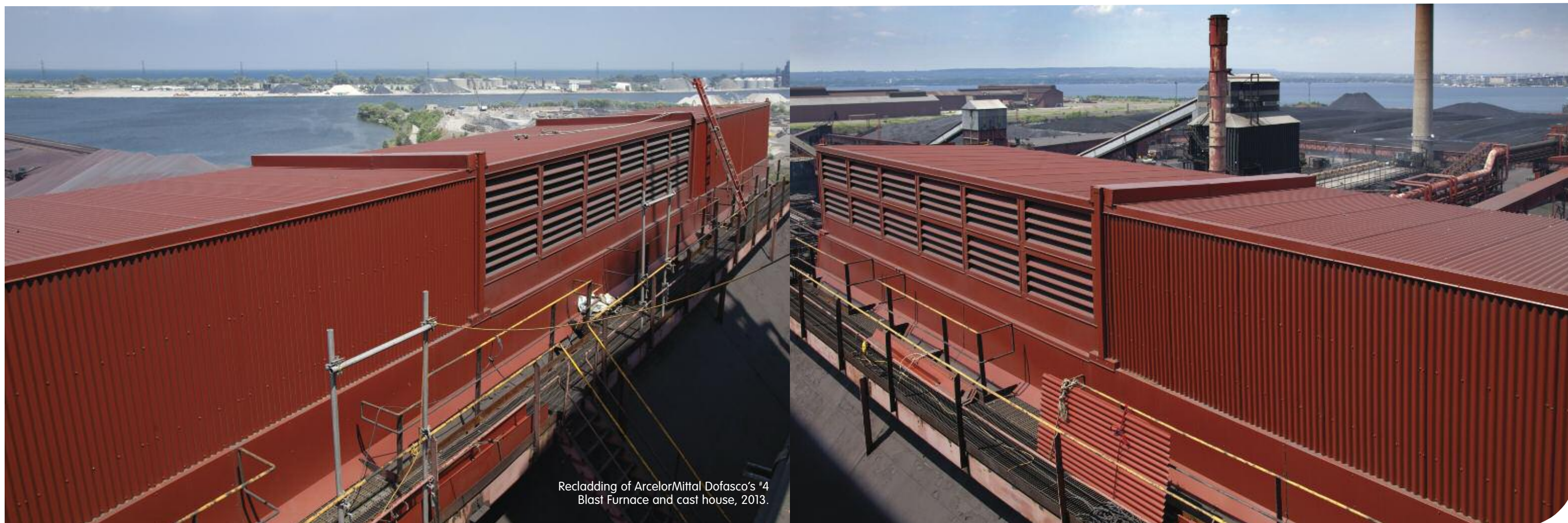
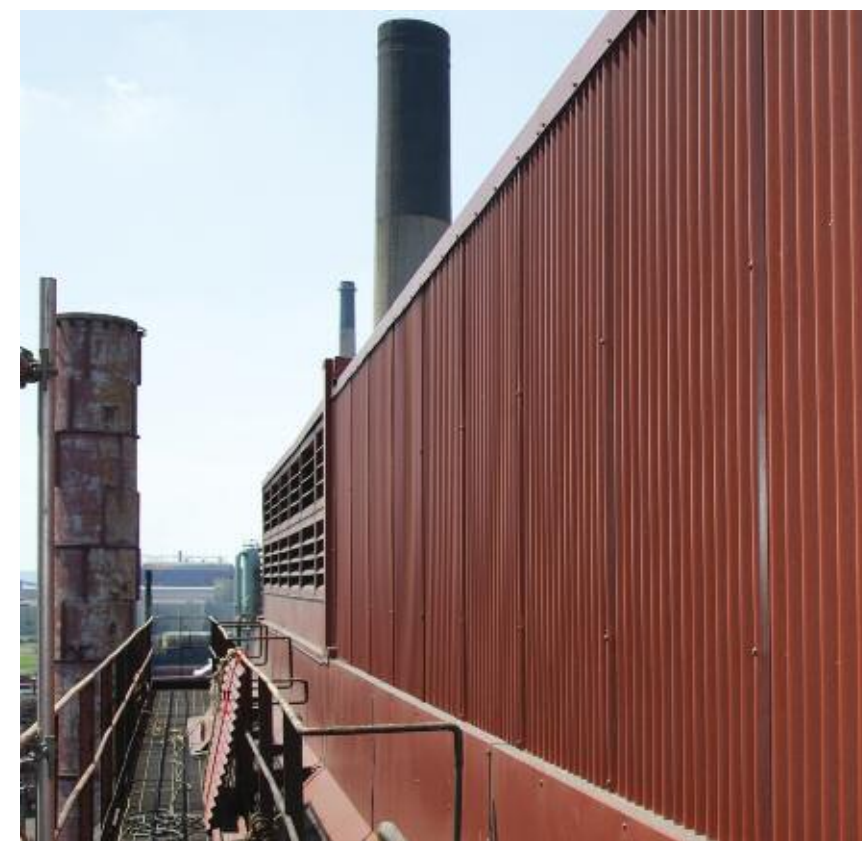
Completed at the end of June this year, the cladding

Blast Furnace
configuration



was roll-formed and supplied by Agway Metals Inc. and installed by Lancaster Sheet Metal Ltd.

Kamran Derayeh, Projects Manager, at ArcelorMittal Dofasco was involved in the Casthouse project from the beginning and says, "It is fitting that our first Canadian project using Solano should be on our own facility. Apart from our natural bias, it does indicate our confidence in its ability to perform as required. The warranty on Solano's film integrity is 25 years. Add to that its ease of application – Solano-coated sheet steel can be installed using a range of normal joining techniques – and you have a paint system that I expect to enjoy significant demand and success."



Recladding of ArcelorMittal Dofasco's #4
Blast Furnace and cast house, 2013.



The "upside down house", is architect Robert Nebolon's name for the 3-bedroom, 2-bath home, he designed for his sister's family. The unconventional home is built on a mere 9.1m x 15.2m (30' by 50') back lot, entered off an alleyway and is squeezed into the densely built community of Hermosa Beach, along Los Angeles' South Bay. Nebolon opted for a more unconventional and sustainable solution, he was determined to give the home optimal access to cooling breezes and unobstructed views of the ocean.

A beach house open to sunlight, ocean breezes and grand views

Additionally, his design was to carve out a private oasis, indoors and out, with a leafy terrace, in contrast with the nearly treeless streetscape.

Nebolon's creation of a two-car garage, plus a carport for guest parking, left little space at grade. Therefore, he built upward, meeting the neighborhood's 9.1m (30 ft.) maximum. Committed to natural cooling methods, he oriented the bedrooms on the second floor and the living area on the third floor, westward, toward the ocean and prevalent breezes.

Nebolon sought out sustainable materials with high durability, low maintenance and resistance to the ravages of salty marine air, for the interior and exterior. Thus the exterior pairs light-green stucco together with reverse box-rib prefinished Z275 (G90) galvanized steel siding, with a fluorocarbon paint coloured Cool Metallic Champagne. Part of a texturally varied and well-balanced composition, the steel cladding wraps the building protectively on its south and west sides, where sun and wind are harshest. The stucco combines integral colour (eliminating painting needs) with a protective elastomeric topcoat. The prefin-

ished galvanized steel siding has a cool-rated, durable fluorocarbon paint (with a minimum 30-year life expectancy).

For Nebolon, "green" design really succeeds, as it does here, "when it transcends the specifications, materials, and technical solutions, achieving spatial invention and a true language of architecture."



"I used the pre-finished galvanized steel siding on the southern and western exposures where the sun is most harsh on building materials and to block excess radiant heat from entering the building during the hot part of the day. Stucco and the fluorocarbon painted galvanized steel siding is extremely durable in this environment.

Nebolon sought out sustainable materials with high durability, low maintenance and resistance to the ravages of salty marine air. The exterior pairs light-green stucco with reverse box-rib prefinished Z275 (G90) galvanized steel siding coloured Cool Metallic Champagne.



The "upside-down" house is a modernist 171.9m² (1,850 sq. ft.) house which exceeds the 2005 Build-It Green Guidelines, performs 36 percent better than California's Title 24 Standard Design for energy efficiency and seeks LEED Silver certification.

DESIGN AND CONSTRUCTION TEAM

OWNER: Barbara and Joe Gunning

ARCHITECT AND INTERIOR DESIGN:
Robert Nebolon Architects and Barbara Gunning

LANDSCAPE: Robert Nebolon 510-525-2725

ENGINEER: Sarmiento Structural Engineering

GENERAL CONTRACTOR: John Madison Construction 310-372-3974

CONSULTANT: Steve Means (energy) 415-259-4068

STEEL CLADDING SUPPLIER: AEP Span 800-733-4955



Montecito Residence Montecito, California

The Montecito Residence is situated on a one-acre site in an environmentally sensitive habitat with dense vegetation and large boulders. The program includes a 279m² (3,000 sq. ft.) main residence, 46m² (500 sq. ft.) garage and a 15m (50 ft.) lap pool. The public wing includes living, dining and kitchen areas and opens up to the main outdoor dining and lounging areas. The second, more intimate wing, contains bedrooms, bathrooms and a library all of which open up to small outdoor courtyards and terraces.

The intention behind the design strategy is tectonic design research that creatively envisions a flexible prototype for mass-produced housing, using steel construction as well as standardized off-the-shelf industrial components. The majority of all steel is manufactured from scrap metals from recycled automobiles, it is a "green" material.

The design advances concepts of adaptive space while creating a "kit of parts" which can then be assembled into 3.65m (12 ft.) modules, as an alternative to the manufactured buildings, mitigating the unpredictable link of manufactured units to serviced land. This residential design is the fourth iteration in an ongoing research project initiated in 1970.



ARCHITECT: Barton Myers Associates
(Information is from the architect's website).
PHOTOGRAPHER: Ciro Coelho/CiroCoelho.com

When You Can't See The Forest For The Wood

Most people agree that in business – any business – fair practices are, well, fair. Such should be equally true for the construction industry. In many instances it is. There are areas, however, where not all stakeholders are satisfied with current legislation.

It is felt, for instance, that the role of legislation is not to promote one company or one product over legitimate and competing alternatives. Thus questions have been raised regarding the BC Government's Wood First Act. It is the opinion of many experts in and related to the construction industry, that Wood First inadvertently achieves a greater number of negatives for BC than it does positives, besides simply being unfair within the construction industry itself.

In Section 2 of the Act it legislates its purpose as "requiring the use of wood as the primary building material in all new provincially funded buildings" which critics such as the BC Chamber of Commerce would prefer to see worded: 'The purpose of this Act is to facilitate and promote the culture of wood through the marketing and promotion of wood as a building material, consistent with the British Columbia Building Code'. As well, the Chamber would like the government to strike Section 3 (b) and (c) which allow the Forestry Minister prescriptive interference in the procurement process through authority to (b) advise on the form and content of agreements and other arrangements for the design or construction of provincially funded buildings; and (c) carry out prescribed responsibilities.

BC's manufacturers and suppliers of the other most common construction materials, used freely in the rest of Canada, feel that materials selection is more than adequately guided through National and Provincial building codes, applied with the expertise of local professionals ranging from architects and engineers to fire chiefs and insurance experts, resulting in an effective balance between aesthetics and criteria such as safety, environmental, economic, and other practical considerations. Legislating a preference for one material, no matter which one, not only impacts the employees, management, and shareholders where applicable, of companies manufacturing, supplying, and installing competing materials, but by extension their suppliers, their families and the communities in which they all operate.

It seems a potentially huge negative consequence from a single and unnecessary piece of legislation that suggests the protectionist and monopolistic environment that international and national free-trade agreements and other trade laws around the world seek to avoid.

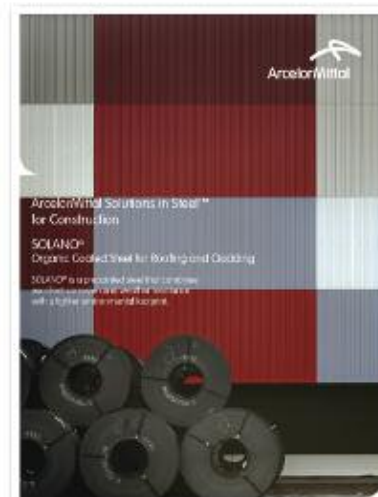
Using the concrete industry as an example, BC's Ready-Mix Concrete Association has 120 plants in the province. Most BC communities of 5,000 or more people have at least one such facility. The industry directly employs between 9- and 10-thousand and estimates its economic impact on the province to be close to \$1½-billion annually. Add to that the cement industry which supplies the concrete industry as well as the sand and gravel suppliers and you have a province-wide network contributing to and dependent upon – concrete.

The purpose of those promoting changes to the Act is not to knock wood. The stakeholders are not an anti-wood lobby. They are against the legislation, not the product it promotes and protects. Steel, concrete, brick, aluminum, glass – all have their place in construction, as does wood – determined by end-use and several other criteria mentioned above. Does it not make sense that those criteria should be the determining factors, not legislation?

Converge 2013

To that end, The Coalition for Fair Construction Practices is holding Converge 2013 on October 15 and 16, 2013 at the Westin Bayshore Hotel in Vancouver. It will be a forum for discussions on non-tariff trade barriers, open markets, the application of life cycle analysis tools, and emerging technologies for sustainable building. Keynote speakers and participants, many already confirmed, include senior representatives of the Canadian materials industries, including wood, plus architects, engineers, and others. Premier Christy Clark has been invited to speak.

Converge 2013 should be of interest to all related to BC's construction industry, from specifiers and designers, to contractors on the ground. For more information go to www.Converge2013.com



A RANGE OF APPLICATIONS:

SOLANO® – designed for sidewall (vertical) as well as roofing (non-vertical) applications in construction. It is suitable for aggressive atmospheric or industrial exposures where corrosion protection is a primary concern.

For more information on Solano®
http://www.dofasco.ca/bins/doc.asp?rdc_id=334875

SOLANO® the new generation of organic pre-finished steels for industrial buildings in harsh climates

ADVANCED PAINT TECHNOLOGY:

SOLANO® is a new generation of plastisol organic pre-finished steels for roofing and cladding suitable for more aggressive industrial applications in harsh, corrosive environments.

LIGHTER ENVIRONMENTAL FOOTPRINT:

SOLANO® is a non-phthalate and heavy metal free topcoat, with better performance when compared to the available plastisol prepaint in North America.



House Twisted – Tokyo, Japan

Alphaville designed this house on a small site surrounded by diverse buildings in Tokyo. The rectangular site was cut off by an existing house. As a result, a linear volume that accentuates the length of the site was conceived.

Kentaro Takeguchi and Asako Yamamoto, partners at Alphaville, then decided to bend the linear volume, which was bent twice, creating a courtyard with the central volume having a direction along the north-south axis. At the bending points, the roof was slanted up to create openings that provide the natural light into the linear volume.

Due to the bending walls, three interfaces were created – the entrance, a sub entrance, and the opening into the courtyard. As a result of the overlapping of these two manipulations the inner volume is filled with light and shadow. As can be seen in the photographs, the

longitudinal house snakes over the plot at two 45° angles.

In terms of structure, the volume is supported by many small columns and beams (125-H) 2m (6.5 ft.) apart, much like a birdcage. However these are reinforced by the slanted beam which performs like a 3-dimensional rigid truss system. The structural design allows all posts and beams to be 125mm x 125mm (5" x 5") in size.

ARCHITECTS: Alphaville, Kentaro Takeguchi and Asako Yamamoto



EDITORIAL INQUIRIES

We would like to hear from you! If you have comments about this issue or a project you would like to see in an upcoming issue of *Steel Design*, please send a description of the project, including photographs, to: The Editor, Steel Design, 1039 South Bay Road, Kilworthy, ON P0E 1G0. Or email: davidfolis@vianet.ca

House in the Southern Highlands – Australia

Glenn Murcutt has adopted corrugated steel sheet as one of his star materials. Flexible, economical and light, it was used in colonial Australia both as roofing material for houses and cladding for barns. Today, supported on metal structures, frequently very elaborate ones, this material enables him to construct buildings in isolated areas for clients seeking an intimate contact with nature. The vast dwelling resembles a long silver line, drawn on the countryside. The architectural shape captures the natural cycles and phenomena on which its design is based and brings them back into the dwelling.

ARCHITECT: Glenn Murcutt
ENGINEERING FIRM: James Taylor
PHOTOGRAPHER: A. Browell

The 70-metre interior gallery – main distribution axis, serving also as the house thermal regulation volume – offers an impressive view.

The roof of the gallery consists of a continuous glazed strip, protected from the summer sun by the prolongation of its metal shield, which allows light to enter from the side, creating a restful atmosphere.



On the south side, the windowless corrugated steel shield covers the gallery, connects and protects a large living-area wing, a small courtyard as well as a barn.



The solar panels covering the north side of the barn supply the household's electricity.



ArcelorMittal

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Light steel framing, cladding and roofing. Superior performance from the inside out.

Solutions in Steel™

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Asthma.ca
Asthma Society of Canada

Building products made with ArcelorMittal Dofasco steel promote a healthy indoor air environment.



ArcelorMittal Dofasco steel is certified to EcoLogo® standard CCD-150 "Steel for Use in Construction Products"



Recycled