

## ArcelorMittal best-in-class steel components

A building is a 'living entity' comprised of many diverse components. Steligen® proposes a holistic approach, ensuring every steel component interacts in a complementary way, addressing the fundamental architectural and construction challenges of economics, sustainability, flexibility and creativity. Here, we provide an overview of the best-in-class steel products which are used to bring this approach to life for office buildings.



### HISTAR®

HISTAR® steels show a high strength and low alloy content, offering considerable weight reduction and cost savings, and time saving in the fabrication process. HISTAR® combines strength with toughness at low temperatures and outstanding weldability. The application of Quenching and Self-Tempering (QST) thermo-mechanical treatment allows all HISTAR® grades to offer improved guaranteed values for yield strength over the whole range of section sizes. HISTAR® is available CE-marked and with min. specified yield strengths of 355 MPa and 460 MPa.

### HD sections

H-sections are hot-rolled wide-flange structural steel shapes used for the construction of buildings, bridges and nearly any type of general or special structures and machines. HD-sections are heavy duty H-sections, particularly suited for use as building columns, long span or heavy duty trusses, transfer trusses, outriggers, belt trusses, heavy girders and moment frames. Building columns made of hot-rolled H-shapes of HD 400 size series (= UC 356 x 406) are very convenient to connect because of the same measurement between the flanges. ArcelorMittal offers the widest range of dimensions in hot-rolled H sections and the world's heaviest HD columns.



### Angelina™

A new generation of castellated beams for sustainable structures, Angelina™ beams are lightweight, long-spanning, structural elements enabling the design of vast column-free spaces. They present an efficient, cost-effective alternative to trusses and open-web joist systems, combining function with flexibility, integrating technical installations and optimising the weight-height or load-weight ratio.



### Cofraplus® 60 composite floors

ArcelorMittal's Cofraplus® floor decks are trapezoidal steel sheets with open ribs and specific embossment, to ensure composite action with concrete used in floor constructions, which permits significant weight, time and cost savings. The profile serves as shuttering for the fresh concrete and as reinforcement in the final stage. Its easy handling and flexible application makes it suitable for almost every project and renovation works, while being fully recyclable at the end of a building's service life.

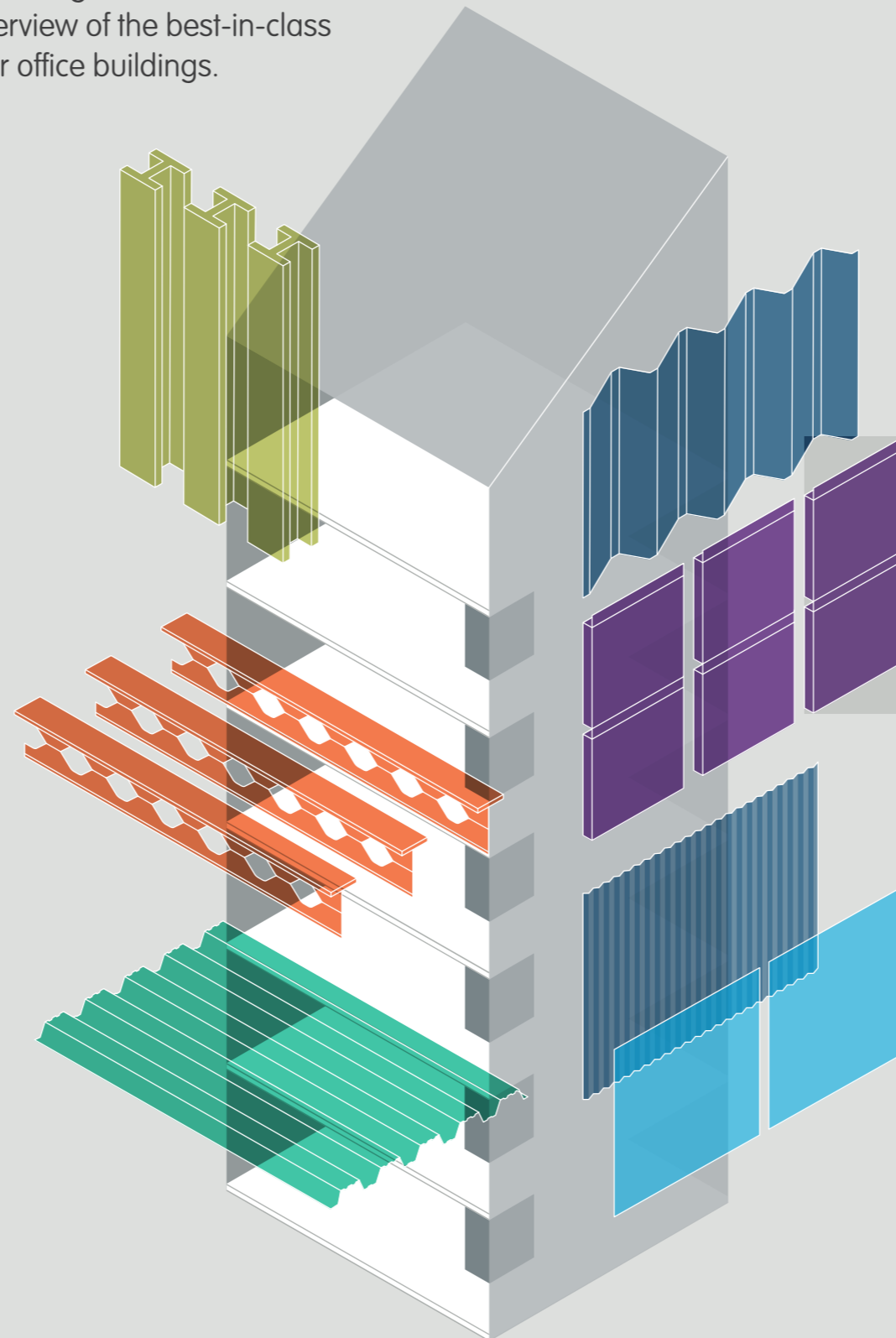
Cofraplus® 60 guarantees economical transportation and quick installation due to its large cover width of 1035 mm. The deck with a height of 58 mm is normally manufactured from 0.75 mm gauge steel, but is also available in 0.88 mm, 1.00 mm and 1.25 mm according to the project specification. The profile is designed for medium spans up to 3.6 m without props and even up to 6.0 m while propping during the concreting, with total slab thicknesses starting from 110 mm. Finish can be simply galvanized or colour coated to enhance aesthetics or corrosion resistance.

### Cofraplus® 220

The long-span floor system for car parks, office buildings and renovation projects, Cofraplus® 220 provides outstanding performance. With a low overall weight, it spans up to 6.0 m without temporary propping. It guarantees maximum flexibility using wings or connectors, and brings the advantages of a continuous slab design. Additionally, it allows for easy handling and fast installation, and clean and safe construction.

### Composite SlimFloor Beam

The Composite Slim-Floor Beam (CoSFB), combines the advantages of composite design with traditional slim-floor construction. CoSFB allows much more easily competitive solutions for long spanning floors and is a perfect response for modern sleek and sustainable structural architecture. Further savings can be made in steel and concrete when CoSFB is combined with Cofraplus® 220.



### Magnelis®

Magnelis® is an innovative metallic coating offering protection in the harshest environments and up to a 25-year guarantee. It is suitable for a wide range of structural outdoor applications, including sub-structures of ventilated facades, composite floors, purlins for roofs, side rails for walls, rainwater systems, and light steel framing. It can also be used for appliances and electrical equipment, agricultural and industrial structures, solar arrays and transport infrastructures.

Magnelis® are also perfectly adapted for building indoor applications such as heating, ventilation and air conditioning equipment (ducts, air treatment units etc), cable trays, raised floors, composite floors etc. Thanks to its unique composition, Magnelis® leads to longer component lifetimes and reduced maintenance costs, while having a reduced environmental footprint. Magnelis® is produced on a classic hot dip galvanising line with a molten bath comprising zinc, 3.5% aluminium and 3% magnesium.



### Coque MD®

Coque MD® is a flat facade cladding system with invisible fixings to a supporting rail. Suitable for new buildings or renovation, blind walls or walls with punched windows, it can act as a covering on masonry walls, concrete walls or steel trays. Changing the Coque MD® panel is straightforward, even when placed mid-facade, and does not require the dismantling of a full row of panels or a complete gable wall. It comprises an invisible fixing system with dedicated supporting rails and adjustable angle profiles to attach to the bearing structure.

### Mascaret®

Mascaret® is a system designed to filter daylight by means of perforations and a tailored profile shape. The perforations create transparency, filtering light depending on time, weather and season and help create a dynamic indoor environment. The system can be used for vertical or horizontal sun-shading.



### Pearl pre-painted steel

PEARL is a galvanised steel coated with a polyvinylidene fluoride (PVDF) multilayer resin. PEARL offers a pearly shine to create interesting light and colour effects. Available in multiple shades it produces the effect of changing colours on the facade, according to viewing angle. It offers exceptional resistance to ultraviolet radiation and enhanced resistance to contamination and external deterioration. PEARL is applied on the new ZMevoLution® galvanised coating giving a reduced environmental footprint.

### IRYSA® pre-painted steel

IRYSA® is a galvanised steel coated with a highly durable, anti-corrosion, thermosetting polyester paint. Unique in the marketplace, this range gives an iridescent sheen, providing outstanding aesthetic effects and colour variations. IRYSA® can be widely used in hot, coastal locations such as the Caribbean. IRYSA® is applied on the new ZMevoLution® galvanised coating giving a reduced environmental footprint.

### Granite® Silky Shine

Granite® Silky Shine is a pre-painted steel for facade systems with a high-gloss finish that enhances the visibility and impact value of buildings, adding an elegant feel to the facade. Its high performing PVDF paint system provides an exceptional level of UV resistance and stability over time for all colours.

### Estetic® BioAir

Estetic® BioAir is an innovative pre-painted steel made with 100% bio-sourced resin, designed specifically for indoor use. Estetic® BioAir has been given three stars and the 'OK biobased' label by the European environmental inspection agency Vinçotte. Three stars indicates that the paint contains between 60 and 80 percent of renewable carbon.

Advantages are multiple:

- Low levels of volatile organic compounds (VOCs)
- Improves indoor air quality
- Free of chromates and heavy metals