

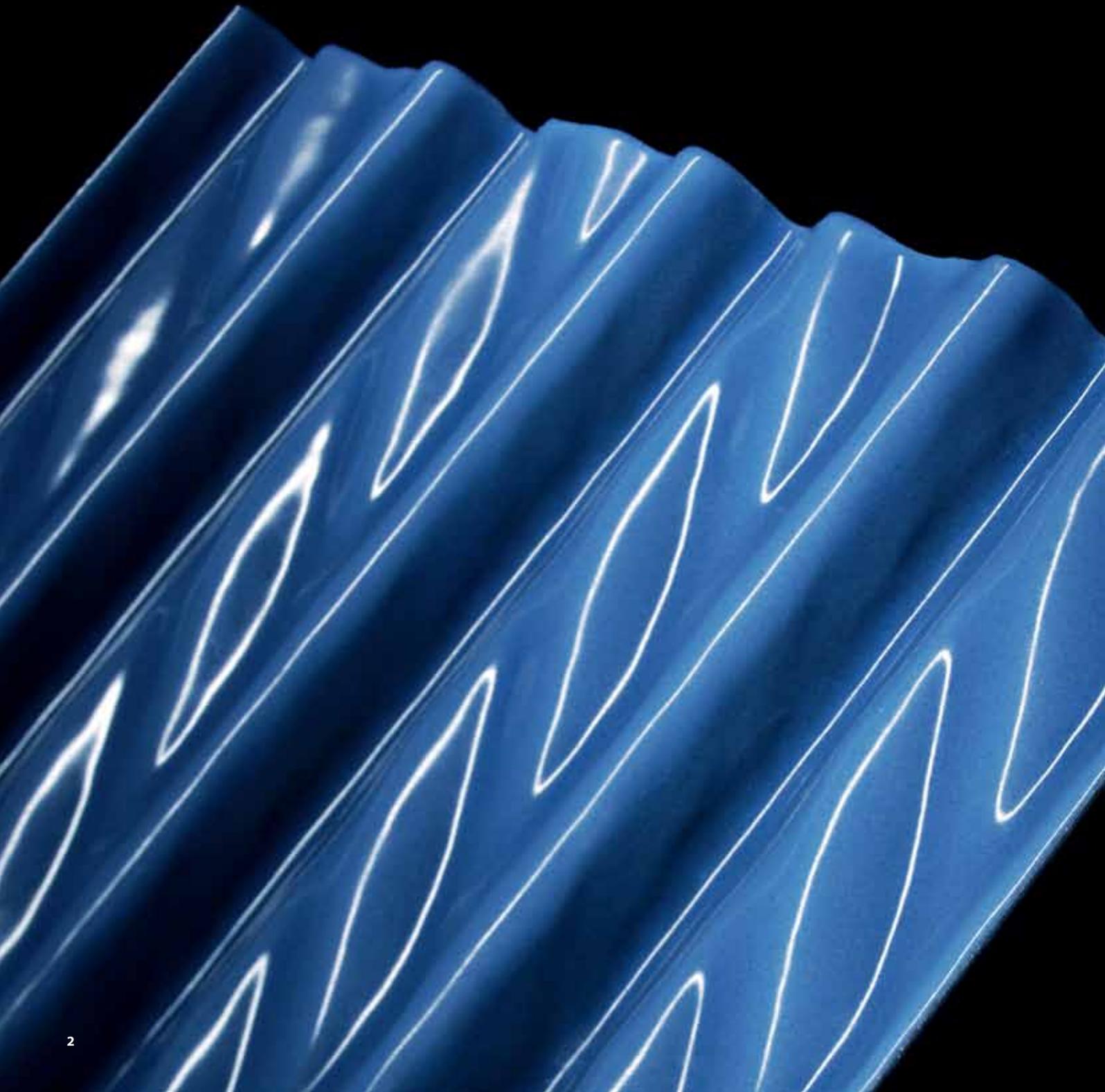
**TATA STEEL**



**Ymvit®**  
High-performance enamelling steels



YMVIT<sup>®</sup>  
THE FOUNDATION  
FOR LASTING  
PERFORMANCE



The Ymvit® range of cold-rolled, batch-annealed steels includes products suitable for all types of enamelling. Ymvit® delivers distinct benefits for the enamelling process and its end-products. These include improved product yield and faster processing. Excellent coating adhesion and formability help ensure the long-lasting performance of a wide variety of enamelled products – even in harsh environments.

### A proven product

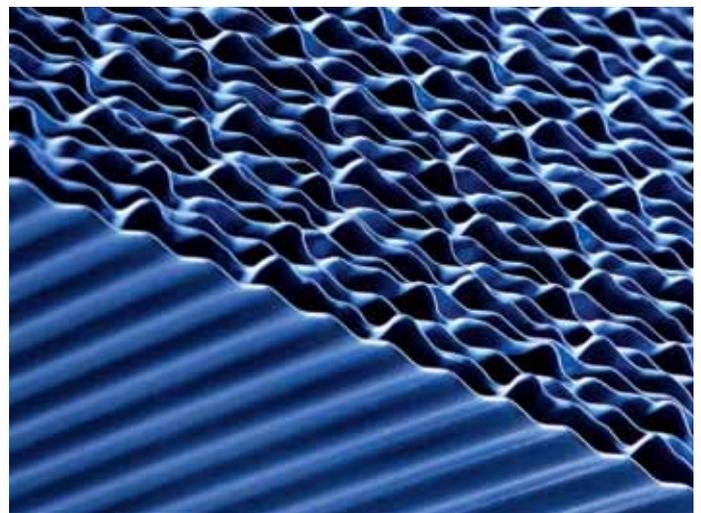
Tata Steel has been producing, improving and continually investing in vitreous enamelling steels for more than 50 years. Tightly-controlled steelmaking processes ensure the consistently reliable quality and characteristics of Ymvit® steels. These include superb coating adhesion and cold forming capability. Ymvit® steels offer a high degree of homogeneity across the whole coil. All Ymvit® products enable enamelling in compliance with EN10209.

The range offers low carbon and ultra low carbon steels tailored to all types of enamelling processes. Ymvit® is used successfully in conventional enamelling, direct-on white enamelling and two-coat, one-fire enamelling. Ymvit® has been proven in a wide variety of indoor and outdoor applications. These include ovens, hobs and cooking pans and sanitary products including bath tubs and shower walls. Industrial applications include architectural panels, road signs and heat exchange panels.

### The benefits are clear

Ymvit® offers significant benefits to enamellers and their customers. The chemical composition enables excellent coating adhesion – for well-finished long lasting products. The homogeneous quality - combined with large-weight, non-welded coils - means customers can cut waste and increase throughput. Ymvit® delivers:

- Hard-wearing, long-lasting products
- Products with a high-quality finish
- Yield maximisation
- Waste reduction
- Improved processing speed and efficiency
- Reduced costs



Package of heating elements applicable in regenerative heat exchangers for power plants with carbon fuel

# YMVIT<sup>®</sup> IN ACTION

## Sanitary products

Ymvit 04 Plus has been specifically developed for the bath tub market.

Its high level of formability ensures that the manufacturing process can run effectively.

In addition, careful quality control ensures that the entire surface of Ymvit<sup>®</sup> steels can be enamelled to a consistently high standard.



YMVIT<sup>®</sup>  
OPTIMISES  
ENAMELLING  
PROCESS



### Reliable products

Few companies can rival the experience and expertise of Tata Steel in the manufacturing of enamelling steels. Our skilled teams exercise care and precision in the development, production and testing of Ymvit®. It means customers can always rely on the quality and performance of the steel in the Ymvit® range.

Our knowledge of product application means we understand the demands placed on enamelled products. Coating quality and durability are vital in resisting graffiti and surviving the effects of water, heat, dirt and corrosive environments. The consistent and precise chemical composition of Ymvit® ensures excellent coating adhesion. This characteristic is a critical factor in the manufacturing of long-lasting, high-quality enamelled products.

### Optimised processes

Ymvit® enables you to optimise your enamelling operations. Our batch annealing process allows the production of large, non-welded coil weights. Without the need to cut out welds, you can benefit from yield maximisation, waste reduction and faster processing. The wide dimensional range of Ymvit® also helps to increase process efficiency by enabling customers to optimise the use of slitting and blanking facilities.

Ymvit® coils are produced to tight thickness tolerances. In addition, careful quality control ensures that the entire surface of Ymvit® steels can be enamelled to a consistently high standard.

### Choice and flexibility

Customers can choose from a range of Ymvit® steels, each one developed to suit specific process requirements and end-product application. The range is available in widths up to 2010mm and in large coil weights.

Our ultra low carbon steels, Ymvit® Extra and Ymvit® Ultra are especially suitable for applications such as architectural panels – where sag resistance is important. All of these steels are highly homogeneous over the whole coil.

Ymvit® Extra is titanium-stabilised and offers excellent formability. It is ideal for enamelled products with complex shapes.

Ymvit® Ultra enables a high-quality finish, even with a very thin layer of enamel. These steels offer improved resistance to carbon boiling and fish scaling. They are suitable for direct-on white, one coat/one fire, two coat/one fire and pore-free enamelling.

Ymvit® 01 and Ymvit® 04 are suitable for ground coat enamelling and limited formability requirements. Ymvit® 04 Plus offers increased formability and was developed for the production of bath tubs.

Ground coat enamelling (if necessary followed by cover coat)	Ymvit® Quality	EN10209	Application
<b>Standard product</b>			
Flat/forming	Ymvit® 01	DC01EK	baking trays, architectural panels
Deep drawn	Ymvit® 04	DC04EK	pots & pans, shower basins, oven cavities
Extra deep drawn	Ymvit® 04 plus	DC04EK	bathtubs
<b>Pore free</b>			
Flat	Ymvit® Ultra 03	DC03ED	heat exchangers
Deep drawn	Ymvit® Ultra 04	DC04ED	heat exchangers
Extra deep drawn	Ymvit® Extra 06	DC06ED	heat exchangers
<b>Direct-on white, one coat/one fire and two coat/one fire enamelling</b>			
Flat	Ymvit® Ultra 03	DC03ED	side panels, architectural panels
Extra Flat	Ymvit® Ultra 03	DC03ED	PV-solar systems and white boards
Deep drawn	Ymvit® Ultra 04	DC04ED	oven cavities, hobs and barbecues
Visible parts of complex design	Ymvit® Extra 06	DC06ED	ovens, cavities and hobs

# MANUFACTURED WITH PRECISION

We utilise modern and reliable steelmaking methods to produce the Ymvit® range of specialised steel. Ongoing investment in process technology enables the stringent control and monitoring of steel chemistry and product characteristics. This ensures the manufacture of steels that consistently deliver both processing and end-product benefits. Our advanced rolling mills enable the production of steel to tight dimensional tolerances.

We draw on many decades of steelmaking experience to manufacture steel for the modern world. We recognise that the skills and knowledge of our people are critical to the success of our operations. We continue to invest in our people to ensure the safe, reliable and efficient production of high quality steel.





## Tata Steel

Tata Steel is one of Europe's largest steel producers. We serve many different and demanding markets worldwide. These include lifting and excavating, aerospace, automotive, construction, energy and power, rail and packaging. Our primary steelmaking operations in the UK and The Netherlands are supported by a global sales, processing and distribution network. Our European operations are a subsidiary of Tata Steel Group, one of the world's top ten steel producers.

Innovation and continuous improvement are at the heart of our performance culture. We aim to create value by offering a sustainable and value-added steel product range supported by unrivalled customer service.



## Working with you

By working in partnership with you, we find the best solutions to meet your needs and help your business to perform. Our technical services team is available at short notice to assist you and your customers. These skilled engineers can apply their knowledge of steel and its application helping customers optimise productivity, efficiency and product performance.

Customers can also take advantage of our research and development resources. Our scientists and technical experts can help resolve complex engineering issues and assist in the development of innovative products.



## Sustainability

The superb coating adhesion provided by Ymvit® makes it a sustainable choice. It aids the production of hard-wearing and long-lasting enamelled products. The extended life of products made with Ymvit® means longer replacement cycles. Ymvit® enamelled steel is also highly recyclable at the end of product life. Waste reduction is an additional benefit of non-welded Ymvit®.

Our steel is fully traceable and produced in accordance with ISO 14001 for environmental protection. We have adopted a class-leading framework for safety across our operations. We drive sustainability in our operations by focusing on manufacturing efficiency, safety, waste minimisation, carbon dioxide reduction and energy savings.

[www.tatasteeleurope.com](http://www.tatasteeleurope.com)

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