

**TATA STEEL**



**Ympress® Laser**  
For world-class laser cutting efficiency



# YMPRESS® LASER A CUT ABOVE THE REST



Ympress® Laser is a range of hot-rolled steels developed for efficient laser cutting and post-cut processing. Steel sheets are manufactured with high consistency to ensure exceptional flatness, minimised internal stress, high formability and high-quality surfaces. This makes Ympress® Laser ideal for automated laser cutting and post-processing. The users report a range of benefits including increased productivity, fewer part rejects and improved end-product quality.



Source: TRUMPF

### An optimised product

Ympress® Laser was developed from the successful Ympress® family of consistent and highly formable hot-rolled, high-strength, low-alloy (HSLA) steels. It has been fully optimised for reliable processing. In addition to HSLA grades, the range includes a certified structural grade.

Laser cutting is a large-scale, flexible and efficient technique for processing steel to extremely fine tolerances and finish. To ensure that Ympress® Laser delivers high-quality results when laser-cut, we worked with supply chain partners during its development. These included laser cutting machine manufacturers, steel stockists and end-users of laser grade steels.

The consistent properties and behaviour mean that you can rely on it to perform, time after time.

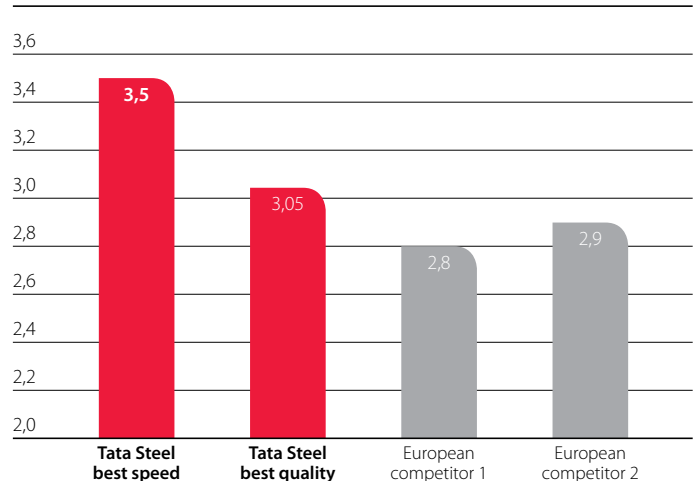
### The benefits are clear

To maintain the high quality standards of Ympress® Laser, it is available only through a dedicated supply chain. This helps to ensure that processors, end-product manufacturers – and the products themselves – derive maximum benefit from the consistent quality of steels. These benefits include:

- Increased productivity – through faster machine set-up, reduced operator intervention and excellent cut-edge quality
- Improved part yield – through easy part extraction, minimal flatness variation, flexible part nesting and more parts within specification
- Improved end-product quality – through repeatable post-cut processing, excellent surface quality and reliable formability

Independent testing shows that significantly higher cutting speed can be achieved

#### Cutting speed (m/min)



# YMPRESS® LASER IN ACTION

## Agricultural machinery

Ympress® Laser delivers high part yield and enables reliable component manufacture at lower cost. It is a popular choice for products that need to perform in demanding environments.

These include agricultural machinery where components must be cut accurately – often with no post-machining – and be tough in service. Laser cutters and fabricators also commend the consistency and reliability in post-cut processes such as bending, welding, machining and coating.



YMPRESS®  
LASER  
WORLD-CLASS  
CUTTING  
EFFICIENCY



### Designed for laser cutting

The sheet-to-sheet consistency of Ympress® Laser makes it ideal for unmanned cutting machines. Careful control of steel chemistry results in a highly homogeneous product with excellent surface qualities. Both sides of the steel are suitable for laser cutting. Low residual stress results in a flatness variation limited to a maximum of 3mm per metre.

Steel consistency means that fewer machine adjustments are required. Cut parts are easy to extract. The high cutting speeds also contribute to increased productivity. The use helps to ensure reliable and repeatable post-cut processing, increasing the part yield and reducing waste and rework. The excellent cut edge quality achieved with Ympress® Laser assists in fast and efficient fabrication.

### User confidence

We want to ensure that Ympress® Laser reaches our customers in prime condition. That is why we have chosen to supply it only through a dedicated supply chain. This chain is subject to stringent, written service level standards and quality control audits.

To give you confidence that you are always getting the best from Ympress® Laser, we offer a full support service. Our specialist technical team and trained sales staff are ready to assist you at short notice. Our team can offer advice on steel selection and application. We are happy to work with you to ensure that you – and your customers - reap the maximum benefit from Ympress® Laser.

### Wide range of applications

Ympress® Laser steels are suitable for a wide range of applications. The structural grade Ympress® Laser E250C (S235JR+AR) is available with CE certification. Used where high strength and good formability are important, typical applications include construction profiles, machine frames, racking and shelving.

Two HSLA grades are available. Ympress® Laser S355MC is used where high strength and toughness are paramount. Applications include excavating and agricultural machinery, trailer parts and chassis members. Ympress® Laser S420MC offers a high strength-to-weight ratio. Applications include automotive safety parts, lifting equipment and structural members.

The steels are available in widths from 700mm to 2070mm and in thicknesses from 1.5mm to 15mm (or up to 20mm on request). They are made either unpickled or pickled and oiled.

### Product Range:

Steel grades: Ympress® Laser: E250C, S355MC, S420MC  
 Thickness range: 1.5 - 15mm (up to 20mm on request)  
 Width range: 700 - 2070mm  
 Surface treatment: Hot rolled dry, Pickled & oiled



# MANUFACTURED WITH PRECISION

The manufacture of Ympress® Laser steel sheets utilises modern and reliable steelmaking techniques and decoiling facilities. Ongoing investment in process technology enables the stringent control and monitoring of steel chemistry and process settings. It also enables us to produce steel to consistently tight dimensional tolerances and flatness at our advanced rolling mills and decoil centres.

We draw on many decades of steelmaking experience to manufacture steel for

the modern world. We keep pace with technological advancements in steel processing – ensuring that we produce steel to meet the needs of laser cutters and their customers.

We recognise that the skills and knowledge of our people are essential to the success of our operations and, ultimately, Ympress® Laser. We continue to invest in our people to ensure the safe, reliable and efficient production of high-quality laser cutting steels.





## 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

Ympress® Laser is a sustainable choice. Its consistency delivers reliable plate processing – cutting waste and improving yield per tonne. Ympress® Laser HSLA grades reduce the amount of steel required to manufacture strong and load-bearing components. This means a reduction in associated raw material and energy resources.

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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