Technical services

Introduction

ArcelorMittal wants to do more than simply supply flat carbon steel. We would like to help you design and develop processes for finding innovative solutions that make best use of the advantages offered by our steels.

Our technical service teams will work with you every step of the way. With the aim of being the preferred steel supplier for all companies that use steel in innovative products, ArcelorMittal co-operates closely with its clients so as to give them a tailor-made service. Our teams help you get better results faster with our steel.

ArcelorMittal's technical teams, which combine the expertise of R&D specialists and Client Technical Support people to maximum advantage, are geared up to provide purchasers of ArcelorMittal steel with advice on the best way to use our steel in their production processes.

Our research departments are based in Belgium. The R&D team in Liège concentrates entirely on flat carbon steel applications in the building industry. The other operates out of Ghent and works exclusively for manufacturers of household appliances, tools and machines, primary processors and suppliers of general industrial solutions.

This chapter will explain the three key missions of the technical teams, i.e. technical assistance, co-design/co-development and the development of innovative steel solutions for sustainable growth.

Technical assistance

Prompt technical support is the first strategic and essential mission of our technical teams. Ideally, by involving our team as early as possible, ArcelorMittal can contribute in every phase of a project or to problem-solving.

Studies and methods

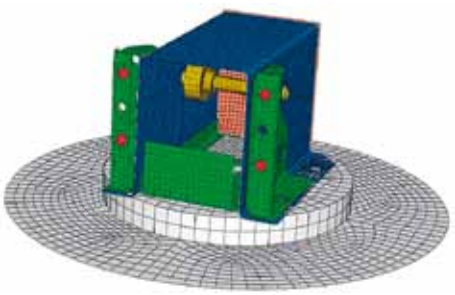
- Design assistance
- Structural calculations
- Knowledge of new materials
- Specifications
- Supply of prototype samples and validation

Industrialisation

- Forming and joining of parts
- Simulation of the drawing process
- Design and adjustment of tooling
- Certification of materials

Production start-up

- Improvement of productivity
- Quality technical assistance



Co-design and co-development

Aiming resolutely for long-term partnerships, our teams want as many clients as possible to involve them at the earliest possible stage in designing their new products.

Their second strategic mission therefore consists in participating in **co-design**. The advantages are obvious. As soon as a client has an idea for a new product, his production department has to examine whether the new concept is feasible. Our teams can make an important contribution in this design phase. They have highly specialised, advanced mathematical models to enable them, for instance, to carry out the necessary simulations and calculations. Even before the client decides to build a prototype, they can compute scientifically how specific types of steel will behave during forming and joining processes. Thanks to these computer simulations, development costs of new end products, and the time it takes to develop them, can be substantially reduced.

Our research teams also have forming presses, welding machines and special installations to test fire resistance, which means that they can carry out real-life testing of what they have worked out on paper. By actively involving our teams at the design stage, our clients can avoid building prototypes that are not feasible in practice, keep development costs to a minimum and shorten the "time to market".

After the design phase comes the development phase, which involves optimisation of each and every step right through to the end client of a product. If the help of a team is called in at this stage, this is what we call **co-development**. For example, the team may advise the client to switch to a new type of steel. This advice often leads to lower production costs or higher sales for the client, and the result is a positive bottom line. The team is not only looking to lower costs but to improve performance and hence enhance the value of the product.

Innovative steel solutions...

The third strategic mission of the teams is the development of innovative technical solutions. They take the initiative themselves, working pro-actively, and are constantly looking for new solutions that could yield technical and commercial advantages for our clients. Their main focus of attention is on reducing the weight of structures, improving the environmental friendliness of products and, more generally, seeking new concepts that are better for people and for the environment. This experience allows us to demonstrate the advantages of the innovations we propose. Offering innovative steel solutions also means that the teams ensure that steel processing costs can be kept to a minimum and that the end product offers improved user safety and comfort.

...for sustainable growth

Our teams are also focusing on designing environmentally friendly electrical and electronic appliances. In this way they help our clients meet the stringent European environmental regulations, such as the W.E.E.E. Directive (Waste Electrical and Electronic Equipment) and the R.o.H.S. Directive (Restriction of the use of certain Hazardous Substances). The fact that steel can be easily recycled, and actually is recycled in practice, is an extra argument in favour of using this attractive material. This mission is fully in line with ArcelorMittal's environmental policy.