

WireSolutions

Operating 9 plants in Europe, with over 10,000 customers over the world , with 6 sales agencies in Europe and 400 000 tonnes of steel sold each year, WireSolutions, an entity of Distribution Solutions, which is itself part of ArcelorMittal Europe, is one of the world's largest wire drawers in Europe With a diverse portfolio of low and high carbon wires, pre stressed concrete strands, ropes and corrosion resistant solutions, WireSolutions is present in all the major industries: automotive, construction, energy, agriculture, the mechanical industry and consumer goods. Standing shoulder-to-shoulder with its customers and partners, the business constantly seeks to develop new innovative solutions in partnership with the ArcelorMittal Research Centres. Today, for example, WireSolutions is recognised worldwide for the quality of its corrosion-resistant product range, Crapal®.

With 1,450 employees, WireSolutions' success rests on its people. Its teams are committed to attaining excellence in serving markets while striving not only to reach, but to go beyond the expectations of their customers and Providence complete solutions to them. Bringing teams together, sharing new added value, leading the conquest of new markets, developing new products and achieving excellence together; this is the way of working that the business aims to promote.

Targeting all markets

More than just the product, WireSolutions aims to deliver global solutions to customers and markets, whatever the segment: offshore, automotive, building & construction or agriculture.

- WireSolutions is an active supplier to the Automotive industry, creating solutions for a large variety of car parts such as tyres, clutches, seats, wipers and many other applications.
- In Construction, steel fibres and PSC strands are reliable solutions for concrete reinforcement. A full range of fencing products is available for securing residential properties, roads, railways and industrial premises.
- In the Energy sector, WireSolutions is a solution provider to the oil industry for the production of flexible pipes.
- In Agriculture, a long tradition of high-quality environmentally friendly solutions means that the brand and products of the business are recognised as one of the best on the market.

Research and development

WireSolutions constantly explores strategic initiatives to pre-empt market trends. For example, the division's Fibres business is conducting research in developing wire drawn steel products for concrete reinforcement used in major infrastructure projects such as tunnels or harbor docks to keep the leadership versus major competitors and gain global market share. Other key initiatives are also under study, such as increasing capacity and capability in the offshore and automotive business on high value added solutions in close partnership with key customers.

Key sites and research centres in Europe Supporting WireSolutions Product and Process engineering departments, the Gandrange Research Centre for Bars and Wire, France.

Located in France, the Gandrange Research Centre is composed of 44 engineers and technicians. Activities include:

- Developing new solutions and products: conception of new steel grades (SOLAM®, FreeForm®, Maflex®...), design of thermal treatments to achieve desired microstructure (dilatometer, cooling tower), surface treatment and coatings development (galvanisation, galvanization, paints, lacquers, powder...)
- Process expertise by providing technical support to the plants and customers
- Contributing to conception and optimisation of processes by using simulation tools
- Instrumentation of industrial processes (thermal camera, pyrometers, force sensors...)

Key R&D facilities:

- Finite element model Forge2015® to simulate forming and heat treatment processes
- Product characterisation at micro and macro scale: Field Emission Gun SEM, macroprobe, torsion & fatigue machines, corrosion chambers...
- Process pilots for machinability, drawing and heat treatment

The Gandrange R&D centre operates worldwide, working closely with WireSolutions and steelmakers of the ArcelorMittal group. Regular technical exchanges take place with the teams in Europe, South Africa, the Americas, CIS and Asia.

ArcelorMittal Bourg-en-Bresse, France

Over the past 100 years, ArcelorMittal Bourg-en-Bresse has built up an international reputation in the manufacture of high technology steel wire ropes. In constant close cooperation with its customers, Bourg-en-Bresse is today a worldwide leader in this field, taking advantage of the metallurgical quality ensured by modern processes of the group's steelmaking processes. The site is also the centre of excellence for the production of steel wire for flexible pipes for the buoyant offshore market. In 2015, the production capacity of the plant was extended with the installation of a new rolling mill and heat treatment furnace, representing an investment of €15 million.

ArcelorMittal Bissen, Luxembourg

Over decades, ArcelorMittal Bissen has grown through a strong innovation and branding strategy. The most famous solution developed in Bissen and recognized by the market as the leader solution well ahead of competition products is the Crapal solution.

Bissen is heading worldwide the business of concrete reinforcement with its Fibers solutions and is one of the leader in providing top quality coated wire to the Fencing and Agriculture markets.

To maintain its leading position a 6.5 M€ investment is under implementation in Bissen and in Poland.

Product innovation

WireSolutions is constantly developing new ideas in partnership with ArcelorMittal's research centres to provide ecological and cost-effective solutions to markets and customers. For example, ArcelorMittal WireSolutions was the first in the world to offer galvanised, waxed and sheathed strand for cable-stayed structures and higher tensile strands (> 2000 N/mm²).

WireSolutions, which has been producing wire for viticulture and arboriculture for more than 80 years, is recognised worldwide for the quality of its Crapal® anticorrosion product range including the latest innovative coatings CrapalOptimum® and CrapalPremium®. Perfectly weldable, the wires are produced according to ISO 9001, ISO 14001 and OHSAS 18001 standards and can be used for a diverse number of applications, notably for agriculture, arboriculture and winemaking.

Winegrowers all over the world use Crapalâ for its many outstanding qualities that work in harmony with the vineyard environment. Crapalâ has a long lifespan. Its specially formulated zinc, aluminium and magnesium coating is designed to resist aggressive chemical treatments. Crapalâ resists corrosion much longer than traditional wire. Its durable smooth surface is less likely to damage the vines and presents greater resistance when in contact with agricultural equipment, tools or posts. Crapalâ also has high ductility, meaning it can be deformed without breaking. This makes it ideally suited to the inevitable bending and twisting that comes with vineyard wire, avoiding tedious and expensive rework.

The ArcelorMittal Marnaval mill (eastern France) is one of the world's leaders in wire production for wiper arms and flat blades. With a capacity of around 25.000 tonnes per year, of which 70% is exported worldwide, Marnaval's flat and shaped wires are principally used in construction and automotive. Always looking for solutions to customer requests, ArcelorMittal Marnaval has developed Plastiflatâ, a new manufacturing process for galvanised polyester coated wire for flat blades.

Services

Customer service is a fundamental component of the WireSolutions business, which has fine-tuned its supply chain processes to offer the best possible service within the best lead times.

WireSolutions, a B-to-B supplier, offers technical solutions and product training modules for its customers with excellent success rates. Full day training sessions with WireSolutions key customers are organized in order to promote what opportunities they get by using WireSolutions products and applications.

Initiatives such as these help to better understand market needs and create a better connection with customers.

Success Stories

In February 2016, WireSolutions was selected as the sole cable supplier for France's first urban cable car project, a major reference project for the business. Once used only in ski resorts, cable cars are increasingly used in cities to travel from one point to another. This modern transportation mode will arrive later this year in the city of Brest (France), with all the ropes supplied by ArcelorMittal WireSolutions in Bourg-en-Bresse. Safe, green and cost-efficient, the Brest urban cable car is France's first ever urban cable car project. ArcelorMittal will supply four D50 mm FLC (full lock coil) ropes with 12 optical fibres in each rope, and two D25 mm haul ropes. Thanks to the efforts of the Bourg-en-Bresse R&D team, ArcelorMittal is one of the only two producers in Europe to integrate optic fibres in an FLC rope, allowing data transmission and offering several functions in the same component, thus reducing costs for the customer.

In May 2015, Wire Solutions signed three contracts to supply a total of around 21,500 tonnes of steel fibres to the prestigious Doha Metro project in Qatar. The contracts represent ArcelorMittal Wire Solutions' first delivery of steel fibres to the Middle East, opening the door to further opportunities in the region. With regular monthly deliveries over two years, these are the largest steel fibre contracts ever signed by ArcelorMittal WireSolutions to date.

Between 2011 and 2013, WireSolutions signed three multi-million pound contracts to supply a total of 12,000 tonnes of steel fibres for Europe's biggest ever infrastructure project, the €20.6 billion London Cross rail project. This was the biggest total delivery of steel fibres in the entire project. Deliveries have been successfully completed for all three contracts. The steel is being supplied out of the group's sites in Bissen, Luxembourg, and Sheffield, UK. Two new premium-quality steel fibre grades, HE++ 55/35 and HE++90/60, with a tensile strength almost double that of standard steel fibres, were key to winning the Doha and London Crossrail projects.

Further to a contract signed with the group Mondenova, 110 tonnes of ArcelorMittal's Crapal®Optimum wire are being used in the construction of the world's biggest greenhouse in Almeria, Spain. When completed in 2014 the greenhouse will have an area of 12 hectares. WireSolutions is the only existing supplier able to offer greenhouse wire that demonstrates 2,500 hours of resistance in salt spray tests. This success will allow the group's mill ArcelorMittal Bissen in Luxembourg to promote Crapal®Optimum for other applications where high levels of high corrosion resistance are required.

In September 2013, ArcelorMittal and Technip, a world leader in engineering, offshore and onshore construction for the energy industry, signed a five-year contract worth over €200 million for the supply of high-performance, high-strength steel wire for the oil and gas industry, to be developed at the ArcelorMittal site of Bourg-en-Bresse, France. The wire is being used in the manufacture of flexible pipes for the development of deepwater and ultra-deepwater oil and gas fields, particularly at depths in excess of 1500 metres. Recently extended by a further two years, this is ArcelorMittal's most significant European contract for its wire activities, consolidating the Bourg-en-Bresse site's technical leadership, reinforcing ArcelorMittal's position as a leading designer and supplier of high-end technological and innovative solutions for the buoyant offshore market. Technip has since confirmed its trust in ArcelorMittal's ability to develop new solutions and has confirmed WireSolutions to be best-in-class in terms of product quality by awarded WireSolutions with the best steel wire supplier in 2015.