

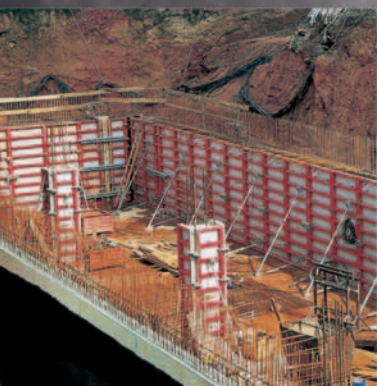
Tie Bars

ARES

Reliability



Tie Bars





Tie Bars

- High performance Tie Bars for industrial formwork systems, lost anchoring solutions, special connections and applications for cast on place and precast
- It is formed from high quality, high carbon steel and is given rips in form of a continuous, right hand, rolled on thread
- Approved certification according to DIBT (registration number: Z-12.5.94), superior quality test certificate according to the ARCELOR process
- Hot rolled, flat deep thread, which assure the best effect or self cleaning after removal
- Tie Bars for formwork in uncompromising concept of maximum quality and safety
- Special Tie Bars for high dimensioned formwork structures
- High performance Tie Bars for all kinds of climbing formwork and single face formwork

ARES Tie Bars are produced in:

- Standard diameter 15 and 20mm (other \varnothing on request)
- Standard length of 6m (6000mm) (other lengths on request)
- Standard bundle of 100 bars (other bundling on request)

ARES Brief History

Established in 1872 under the name of S.A. des Hauts Fourneaux de Rodange, the enterprise limited its activity to the production of pig iron until 1907 when a Thomas steel melting shop was installed, along with several rolling mills. Meanwhile, in 1905, the company had merged with S.A. Ougrée-Marihaye, a Belgian iron and steel producer of which the plant at Rodange became a division.

In 1935, the works again became autonomous with its incorporation as a distinct limited company under the denomination of S.A. Minière et Métallurgique de Rodange.

The installed section mill was completed by a 600mm mill train for special sections and a 300mm bar mill train to which was added, in 1950, a wire rolling train. During the 1950's, the Thomas melting shop was adapted to bottom-blowing with enriched air. An LDAC converter was installed in 1964. In 1971 the Thomas converters were adapted to blowing with pure oxygen by the OBM process.

The bar and wire mill was completely modernized in 1969, and in 1970 a new blooming mill came into operation.

In 1973 the company merged with the Athus division of Cockerill (Belgium) to form S.A. Métallurgique et Minière de Rodange-Athus. At the time, more than 5,400 people worked on the industrial site of Rodange-Athus. Industrial restructuring, enforced by the steel industry crisis which began in 1974, led to the complete shut-down of the Athus division, located in Belgium, and the cessation of hot metal production at the Rodange works in the Grand Duchy.

An agreement reached in 1977 with the Belgian and Luxembourg governments, as well as with ARBED, enabled the company to make a fresh start as a roller, and thus to undertake, on an improved basis, the investments needed to guarantee high technical levels and improved productivity.

The section mill was modernized in stages: installation of a walking-beam reheating furnace, modernization of the layout of the mill train and of the rail finishing shop. A pilot installation for heat treatment of rails put into operation at the end of 1985 enables Rodange to maintain its position in the leading group of manufacturers of rails, a product which has always been the speciality of the company.

In 1994 the steel plant of Esch-Schiffange and the rolling mills of Rodange merged into one company ARES in which ProfilARBED participated with 76%. Esch-Schiffange is equipped with an electrical arc furnace which was installed in 1992.

With the merger in 2002 of Aceralia, Arbed and Usinor into ARCELOR, also ARES became part this new group. Arcelor was created through determination of these three European groups to mobilise their technical, industrial, and commercial synergies in a joint venture to create a global leader with the ambition of becoming a major player in the steel industry.

ARCELOR

Arcelor was created in February 2002 by three steelmaking companies, Aceralia, Arbed and Usinor, with the intention of establishing a European company as the leader of the global steel industry. With a turnover of 32.6 billion euros in 2005, the company holds leading positions in its main markets: automotive, construction, household appliances and packaging as well as general industry.

The company - number one steel producer in Europe and Latin America - ambitions to further expand internationally in order to capture the growth potential of developing economies and offer technologically advanced steel solutions to its global customers.

Arcelor employs 96,000 associates in over 60 countries. The company places its commitment to sustainable development at the heart of its strategy and ambitions to be a benchmark for economic performance, labour relations and social responsibility.



ARES

- Operational unit of ARCELOR Long Product Sector
- Is producing steel since 1872
- Operates in Luxembourg, one steel plant in Esch-Schiffflange and two rolling mills in Rodange on which are produced reinforcement bars, crane rails and special sections
- The sales of those products are handled by ARCELOR REBAR COMMERCIAL (ARC) and ARCELOR RAILS PILES AND SPECIAL SECTIONS (ARPS)
- Was implicated in the development of the Tempcore process for rebars and the inline heat treatment of rails
- The last major revamping of the rebar mill was realized in 2005 and the revamping of the section mill is planned for 2006.

Quality and Environment

- ARES is certified according to ISO 9001 (Quality Assurance) and 14001 standards (Environmental Management).
- Our Quality Assurance System is the guarantee for continuous high quality standards and products.
- Our environmental management standards exist to ensure that products and services have the lowest possible environmental impact.
- Quality Assurance System and Environment management structure are certified and regularly improved.

Service

- Aim to offer innovative solutions improving security, cost, speed and flexibility
- On-time delivery
- Reliability on orders and rolling schedules, delivery dates
- Special lengths, special bundling, or dimensional tolerances on request
- Good commercial communication
- Quick and accurate document handling
- Quick claim treatment.

ARES provides through ARCELOR LOGISTICS various port services:

- Shipping to ports worldwide
- Shipping Container (Conventional, Multimodal)
- Administrative formalities
- Port handling
- Agency management.

Tie Bars

	ARES 15 900/1100	ARES 20 900/1100
Central Diameter	15mm	20mm
External Diameter	17mm	23mm
Yield Load	155kN	280kN
Ultimate Load	190kN	345kN
Working Load	90kN	160kN
Elongation Agt	4%	4%
Elongation A _{10d}	7%	7%
Nominal section Area	177mm ²	314mm ²
Thread Distance	10mm	10mm
Nominal Weight	1.44kg/m	2.56kg/m