

## Vossloh Cogifer foundry centre of expertise

The largest production capacity of turnout crossings in the world

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## International leader in the field of cast manganese common crossings

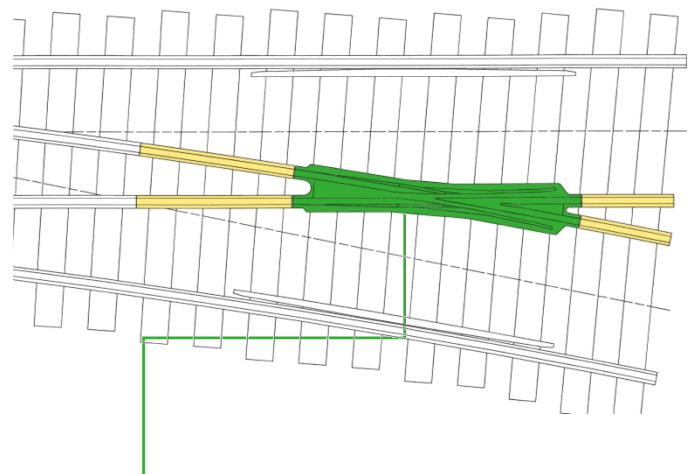
Vossloh Cogifer is a global leader in the field of turnouts and associated equipment for all types of rail networks. The track crossing is located at the centre the turnout and provides the continuity of two intersecting routes. Subjected to high stresses, it is a key element in comfort and safety.

**Vossloh Cogifer produces more than 4000 track crossings per year and 60,000 crossings are already welded into tracks...**

Located in the Pas-de-Calais, Outreau Technologies has been producing track crossings and cast manganese cradles for railway infrastructures throughout the world since 1954.

With 200 employees, the foundry designs and manufactures cast manganese, fishplated or welded common crossings to suit all modes of transport guided by the rails. Outreau Technologies also supplies crossings that are pre-hardened by explosion.

With highly qualified staff and the most modern production facilities, Outreau Technologies is the foundry centre of expertise of the Vossloh Cogifer Group. Capable of making crossings for all networks (national lines, high-speed lines, suburban networks, metros and trams), Outreau Technologies has internationally recognized expertise.



**Manganese crossing**



The site handles all stages, including the design, shipping, manufacturing, quality control and administrative stages.

*Outreau Technologies has a policy of innovation in the field of alloys and is continuously improving its processes. The objective is to improve the speed, capacity, frequency and safety of networks..*

Its experience also enables it to offer a maintenance support service, which includes everything from expert assessments to building up by arc welding and in-track reprofiling operations.



## Quality foundry technology for optimized safety

This global foundry expertise has enabled Vossloh Cogifer to strengthen its international leadership in the production of common crossings.



- ▶ Certified welding process following a static (folding test) and dynamic (fatigue test) inspection
- ▶ Flash welding with Maustinox Mn<sup>®</sup> insert
- ▶ 2 flash welding machines incorporated into the production line: more than 60,000 welds
- ▶ CATIA software for 3D design and computerized simulations
- ▶ Internal regeneration system for casting sand



A centre of excellence for track crossings has become the specialist for crossings pre-hardened by explosion



- ▶ 2010 Homologation of the 1<sup>st</sup> pre-hardened monobloc crossing by the Swiss railways



- ▶ R&D I-Trans programme: 5 years of in-track tests, TTSA (Track Train System Availability) project in collaboration with the Swiss railways and Eurotunnel

### ADVANTAGES OF THE PRE-HARDENED CROSSING

- ▶ Increases the load carried by **40 %**
- ▶ Decreases maintenance costs by **50 %**
- ▶ Overall life cycle costs gain of **20 %**

*From drawing board to completion, innovative designs for new and existing channels.*

## Foundry centre of expertise, leadership in quality products

Crossings and associated products are delivered to both track turnout manufacturers and rail networks, on all continents, in more than 50 countries. Our crossings are subjected to extreme conditions in terms of axle loads, frequency and/or speed, and climate.



Outreau Technologies supplies crossings and cradles that meet the internal health criteria of European standard 15689.

ISO certification, updated 2000 version

### Worldwide references

Algeria, Saudi Arabia, Belgium (Infrabel), Bolivia, Chile, Denmark, Egypt, United Arab Emirates, Eurotunnel, Finland, France (SNCF, RATP), Hong Kong, Italy (RFI), Morocco, Mauritania, Mexico, Norway, Netherlands, Portugal, United Kingdom (Network Rail), Sweden, Switzerland (SBB), Tunisia, USA, etc.

### Homologations

SNCF, RATP, INFRAABEL, RFI, PRORAIL, BANEDANEMARK, CFF, NETWORK RAIL...

### Group foundry units



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