



Discover easy track supply

Supplying construction sites with rails and turnouts

Easy track supply

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Rail preparation



Rail loading



Turnout transport



Rail transport



Rail replacement

Installation / welding



Unloading



Disposal

Logistics



Rail assembly



Rails and turnouts at the right place at the right time. We assemble rails with millimeter accuracy for all kinds of customer orders. Then the rails are loaded onto special rail and turnout transport wagons, delivered punctually to the construction site and professionally unloaded and installed – including all the welding and superstructure work. We ensure optimum supply services in the factory, on the move and on site: **Easy track supply!**

Factory services



Services



Long-welded rail production



Transition joints



Insulated joints



Profile machining

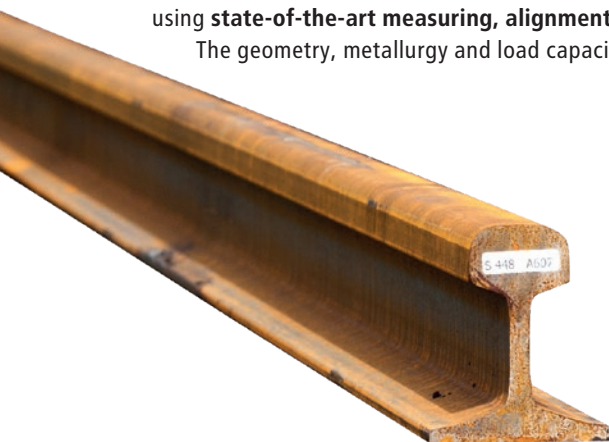
STRONG. INDIVIDUAL. EXACT.

All types of rails

Individually manufactured to your specifications!

Thousands of meters of rails are processed every year in our four Rail Centers. We stock all the common rail profiles in both head-hardened and standard quality. Cutting, welding, alignment, re-profiling, compression and drilling: flash butt welded rails up to 300 meters long are precision-manufactured for every customer order using **state-of-the-art measuring, alignment and milling technology**.

The geometry, metallurgy and load capacity of these rails are all top quality.



Our four welding plants



Solutions for key account customers

Rails are the life blood of our infrastructure, and their manufacture should be entrusted to experienced specialists. We offer our key account customers the storage and delivery capacities they need, and our merchandise planning and control system ensures that the production and delivery phases are coordinated perfectly. Take advantage of our wealth of experience in providing **railway infrastructure solutions** and **just-in-time logistics**.

Cut-to-size rail lengths

Rail lengths precisely cut to the millimeter ensure your construction site has everything it needs, shortening construction times and minimizing track closures. Any emergency deliveries required following an accident are naturally given the highest priority.

Glued insulated joints

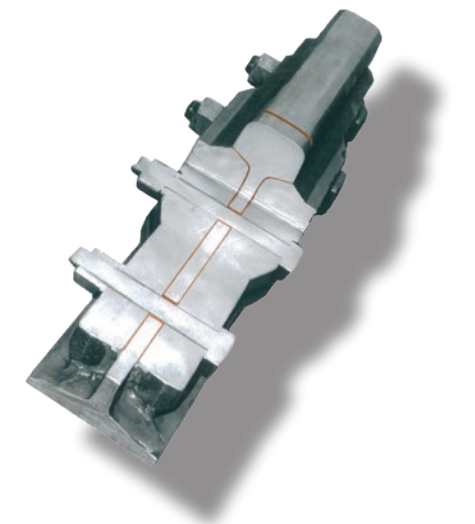
Insulated joints – whether **classic S joints** or **30° angular joints** – guarantee that signals are transmitted reliably. We produce joints either in customized lengths or integrated into the rail section, and we also manufacture special-purpose joints.

Transition joints

We manufacture **profile transition joints** for all common rail profiles. Compression and flash butt welding (or alternatively, manual or thermite welding) are used to create a transition between rail sections of different profiles or different steel qualities. We can also produce transitions between **grooved rails** and **Vignole rails** on request.

Grinding new rails

We remove the mill-scale (decarbonized layer) from our **factory-milled new rails**, which helps to delay the formation of corrugations and renders time-consuming rail grinding at the construction site unnecessary. New rail grinding **improves the transverse and longitudinal profile** created by the milling process, significantly delaying the rail wear that inevitably results from operational use. Once it has been installed, the rail can be used immediately without any restrictions.



Long-rail logistics



VERSATILE. EFFICIENT. SUSTAINABLE.

Transporting rails, loading rails We know how!

Easy track supply: The Vossloh logistics division has haulage means and equipment to provide construction sites with the best possible supply services. First, the rails are loaded at our Rail Centers in due time and in an arrangement that facilitates coordinated unloading at the construction site. This forms the foundation for all subsequent phases and ensure that rails of up to 300 m in length get to the track. After they have been loaded onto special vehicles or customer-owned wagons, we transport the rails punctually to the construction works, where they are unloaded according to specifications. The delivery's progress can be followed via a web-based tracking portal. When **coordinating rail-bound transports**, we take care of the planning, vehicle dispatching, unloading schedules and retrieval of the empty wagons. Our portfolio also includes coordinating the work train locomotives, their drivers, the crane and its operator.

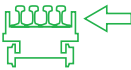
Efficient and sustainable!

Our eco-friendly rail-bound haulage emits significantly less CO₂ than transportation by truck. Our equipment requires no additional loading materials such as wood or wire that then have to be disposed of after delivery, and our special haulage vehicles are also fitted with low-noise, low-friction brakes.

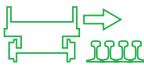
Services



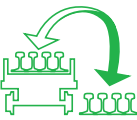
Rail transport



Loading



Unloading



Rail replacement

STS Rail Transport System

STS long rail transport units with **special attachments** have cross-members and rail holders that make wooden packing and fastening equipment superfluous.

AAW Loading and Unloading Vehicle

Combined with the STS rail transport system or the standard flat wagon, the AAW can be used to load and/or unload **long rails up to 180 meters in length**.

SAS Rail Unloading System

This flexible and cost-effective system is used to unload long rails from STS or standard flat wagons onto sleeper heads or the middle of the track. The SAS system is delivered by truck and **quickly set up for work**.

Robel Transport Units

Long rail transport units (LSEs) are components of the **Robel rail transport system**, which consists of LSEs and the SLW rail loading wagons. Wooden packing and fastening equipment are not needed.

SLW Rail Loading Wagon

The SLW gantry crane wagon travels on rails that run the entire length of the Robel transport unit. The **hydraulic articulated crane** makes the SLW the fastest and most efficient way to load and unload long-welded rails.



SLW rail loading wagon

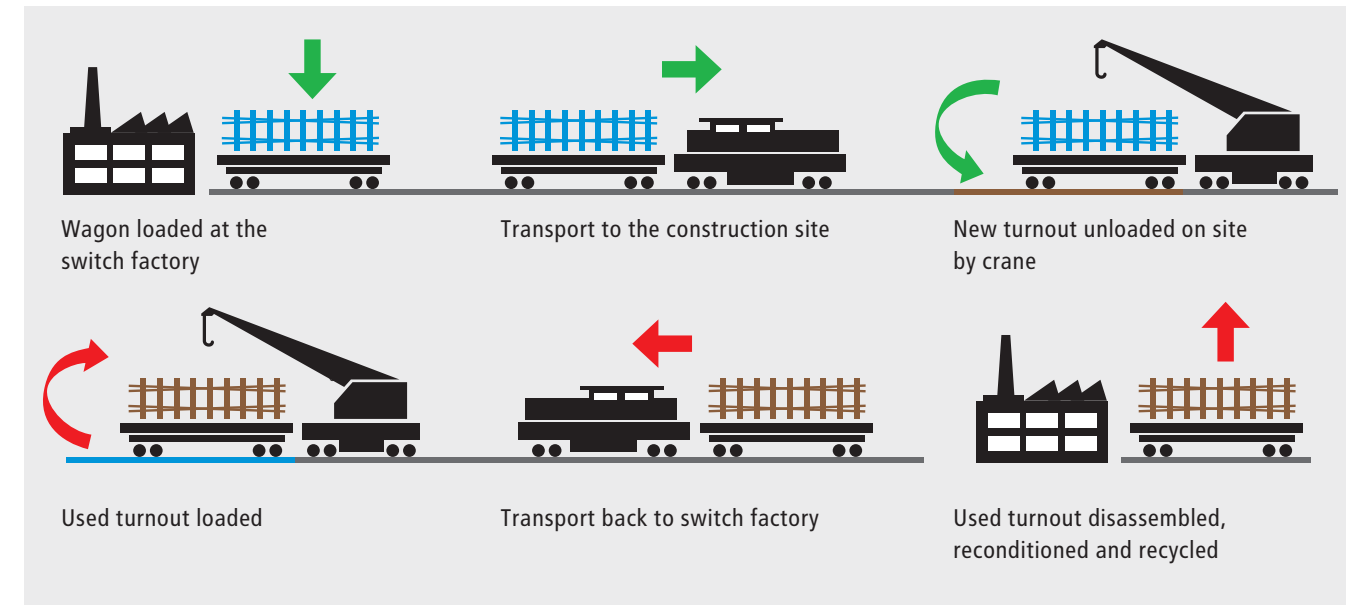
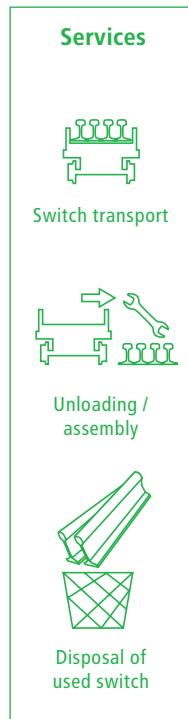


Reconditioning or recycling: We get the best out of used rails

Used rails are sent to reconditioning plants where the decision is made whether to recondition or recycle them. Reconditioning is eco-friendly, sustainable and prolongs the rail's service life. Most rails only wear on one edge, so the non-running edge retains enough material for a new running edge. We make sure that rails which can no longer be used are recycled at the best possible terms.



Switch logistics



Switch transport wagon

Only in exceptional cases, can pre-assembled switch segments be hauled on standard flat wagons. In order to be able to transport switches in compliance with loading gauges that differ internationally, special transport wagons have been developed that are equipped with loading beds that can be **tilted** to allow the safe transport of switches. All transport wagons are **TSI-approved** and equipped with **GPS tracking**. They can be hauled fully loaded at a top speed of 100 km/h, which makes them suitable for **integration into standard trains**.

Switch logistics throughout Europe

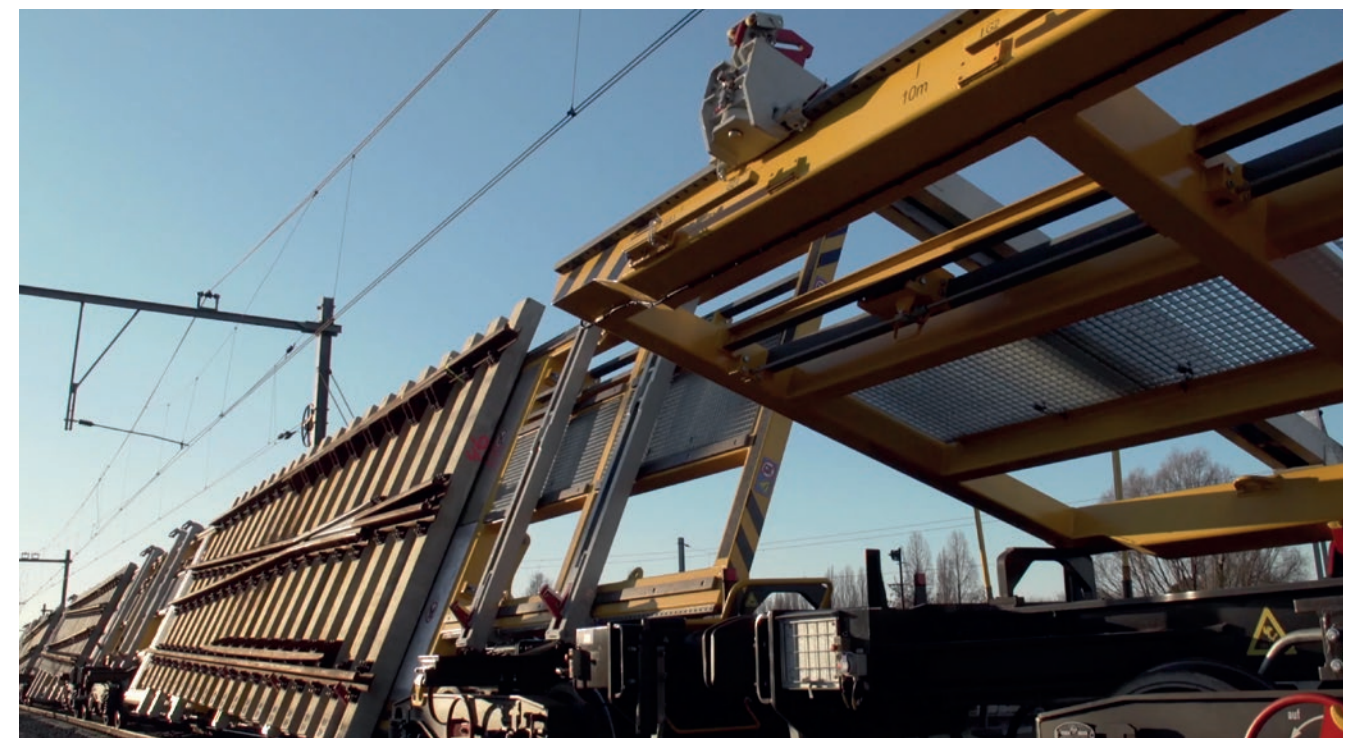
In addition to the German-speaking domestic market, Vossloh's logistic experts are also active in Scandinavia, especially in **Sweden** and **Norway**. We also organize the supply of switches to construction sites in other European countries such as Poland and the **Netherlands**.

Switches and logistics Your one-stop shop!

Switches and their drive, locking and monitoring systems are **key components** on every rail line.

Easy track supply: Vossloh is a real switch specialist. Besides planning, construction, configuration, installation and removal, we also take care of all aspects of transportation. Vossloh has a fleet of **19 special switch transport wagons** that it deploys across Europe to supply construction sites with switches and remove the used ones.

Places to store switches and assembly areas are rare. Pre-assembled switches can be made to exact specifications in the factory and custom-fit on site straight away, exposing nearby residents to less noise and fewer emissions. Unloading fully assembled switch segments at the site using a self-propelled crane is several times faster than assembling individual switch components. We'll also take care of loading and returning used switches for reconditioning.



Loading and replacing rails at work sites



FAST. FLEXIBLE. ON TIME.

**Every construction site
expertly supplied**
Delivery, unloading and removal

Network operators like to finish construction work quickly, and Vossloh's logistics division is dedicated to pursuing this goal – with **easy track supply**. We supply all kinds of construction sites with the right transport and loading systems: loading and unloading vehicles, rail unloading systems, Robel transport units and rail loading wagons. We can also transport rails safely to construction sites using freight wagons (e.g. from DB Cargo). We also have the perfect solution for replacing turnouts in the form of our switch transport wagons. And as for rail replacements, we even have a **fully automatic assembly line system** in our portfolio!

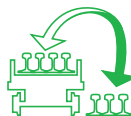
Services



Shorter track
closures



Continuous
welded track



Rail replacement



AUTOMATIC. INTELLIGENT. INEXPENSIVE.

Fully automatic rail replacement New rails just like on an assembly line

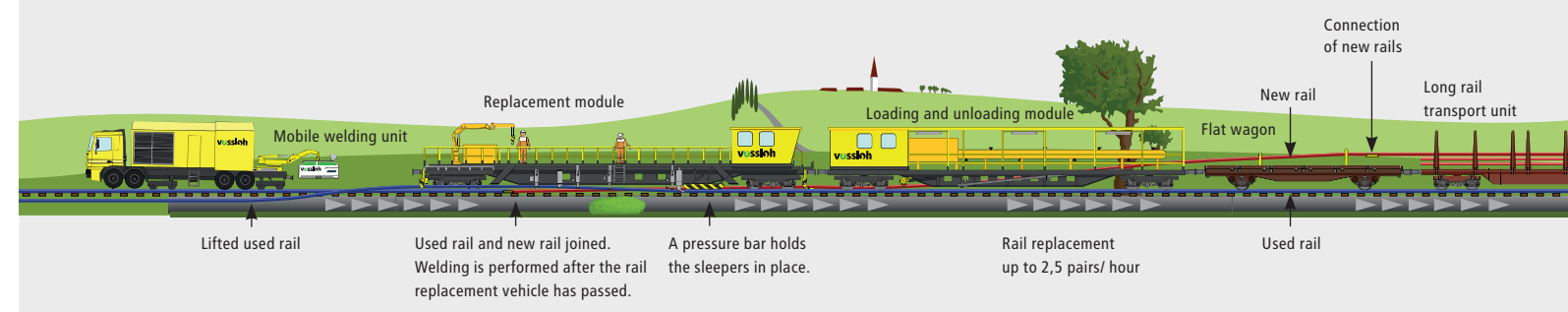
Even with the best care available, the time eventually comes when rails have to be replaced. Vossloh has the perfect solution for this large-scale operation: our assembly line rail replacement system. The process of replacing rails including the welding work, track neutralization and loading the old rails for removal is all done using an assembly line method.

Assembly line rail replacement system

- Shorter track possessions and construction periods thanks to the module's non-stop operation
- Integrated production of continuously welded track using mobile flash butt welding
- Cost-effective deployment thanks to the combination of unloading and replacement procedures
- Long-rail transport unit used for delivery and removal
- Uninterrupted process monitoring
- Full compliance with the rail's prescribed bending line



Vossloh's Rail Replacement Train



Mobile welding services



VARIABLE. COMPETENT. MODULAR.

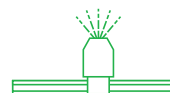
Services



Mobile flash butt welding



Mobile welding factory



Thermite welding

Track welding

Perfectly connected on the move

Rail joints are the most susceptible part of a railway line. In addition to its factory services, Vossloh also provides solutions for track-side welding for every kind of line, track, region and customer requirement.

Easy track supply: Our experts and equipment ensure completely "continuous track". We do **flash butt welding** using our flash welding module vehicles or our mobile welding factory. We use **thermite welding** on turnouts and when fabricating transitions between different rail profiles. And we also carry out all kinds of **build-up welding** work.

Road-rail vehicle with flash welding module

- ▶ Road speed: up to 80 km/h
- ▶ Fast on-railing and off-railing
- ▶ Track speed: 20–30 km/h
- ▶ Compressive force: 600 kN
- ▶ Welding burr sheared off automatically
- ▶ 35–40 welds per shift

Mobile flash butt welding

Mobile flash butt welding is the most modern and highest quality form of rail welding technology, and it's used worldwide in all rail welding factories to manufacture long rails. For over 20 years now, Vossloh has **also** been using **mobile** flash butt welding. Mounted on road-rail vehicles, these welding modules provide maximum quality, economic efficiency and flexibility in the manufacturing of **continuous welded track**. Our mobile flash butt welding teams have already been in action on three different continents.

Thermite welding

We mainly use thermite welding on turnouts and track sections when requested. With thermite welding, the heat generated by a chemical reaction of **aluminum granulate** and **iron oxide** produces molten steel, which allows the rail ends to be securely joined together.

Build-up welding

With **build-up welding**, the same or a similar material is welded onto the rail to reinstate the rail's original condition. The procedure is particularly suitable for repair-welding of worn or corroded rail parts.



Modular and fully automatic Our mobile welding factory

In order to also be able to offer the quality of a welding plant on site, Vossloh has developed the mobile welding factory. Its modular design includes special wagons and a flash butt welding unit. Many construction sites can be supplied faster, more easily and less expensively. With the mobile welding factory, base rails from the milling plants are welded into long-welded rails in the **immediate vicinity of the construction site**.

Benefits of a mobile welding factory

- ▶ Short rails welded on site
- ▶ Rails up to 400 m long fabricated on site on special wagons
- ▶ Highest weld geometry standards thanks to factory-based alignment and grinding technology
- ▶ Minimizing transport distances for long welded rails reduces costs
- ▶ Simplified logistics thanks to needs-based production on site
- ▶ Construction progresses faster through the use of long welded rails
- ▶ Independent power supply
- ▶ Suitable for all common rail profiles and steel qualities

Manufacturing of long rails up to 400 m



Landmark projects at home and abroad



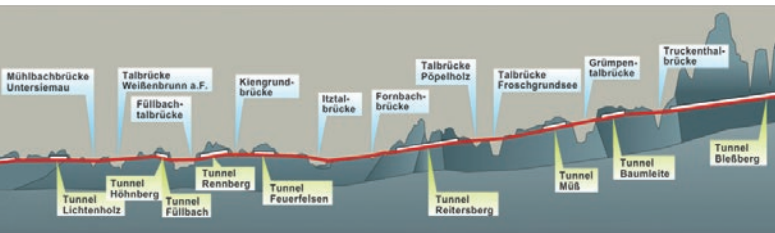
INTEGRATED. SYSTEMATIC. METICULOUS.

Complete logistics for large-scale projects

We'll organize it!

With large-scale projects, shut-downs are particularly expensive, and our logistics division is there to help prevent that. We take care of the **complete logistics** for construction works. Right from the start, we work closely with the welding and reconditioning plants, rolling mills and switch factories. In addition to **just-in-time deliveries** of rails, switches, sleepers and ballast, we also organize the loading work, work locomotives, site shunters, vehicle inspectors and logistics experts.

Section of the topographical map



Vossloh on the newly built Berlin – Nuremberg rail line

Vossloh was the expert for the site supply logistics on the newly built lines of the **8th German Unity Transport Project**. The 107-km section of the route between Ebersfeld and Erfurt was the most complex part of the 500 km long **Nuremberg – Berlin** line. Half of this section comprises civil engineering works, and it runs over 29 viaducts and through 22 tunnels.

Vossloh was initially significantly involved in conceptualizing the **complete logistics**, with overtaking stations, junctions, rail hubs, access routes and sidings all having to be supplied as well.

This was a real landmark project for Vossloh, and not just because all our core business units were involved in this large-scale project, but also because the line's sequential construction and provisional facilities required a particularly high level of upstream and downstream logistical expertise. During the main construction phase there were up to **500 personnel** on the site.

In addition to the regular site supply, logistics were also needed for regular cleaning, tests and trial runs on the new line. The emergency and fire drills required were also carried out in the tunnels.

As the project drew to a close, a series of HSG grinding runs was carried out before the newly built line was put into operation.

The line has now been operational since 2017 with trains speeding along it at over 300 km/h!



Easy track supply Our transport system portfolio

Transport systems		Maximum load	Loading system for unloading	Loading system for loading	Overall length	Weight when empty	Weight loaded	Vmax empty / loaded
Robel transport units	120 m	up to 28 lengths 3,360 m	SLW	SLW	6 wagons, 140 m	190 t	392 t	120 km/h / 100 km/h
Robel transport units	120 m	up to 30 lengths 3,600 m	SLW	SLW	6 wagons, 140 m	190 t	406 t	120 km/h / 100 km/h
Robel transport units	180 m	up to 28 lengths 5,040 m	SLW	SLW	9 wagons, 211 m	280 t	583 t	120 km/h / 100 km/h
STS long-rail transport units	120 m	up to 36 lengths 4,320 m	SAS / AAW	AAW	7 wagons, 140 m	161 t	421 t	100 km/h / 100 km/h
STS long-rail transport units	180 m	up to 36 lengths 6,480 m	SAS / AAW	AAW	10 wagons, 199 m	230 t	619 t	100 km/h / 100 km/h
Samms flat wagon	120 m	up to 45 lengths 5,400 m	SAS / AAW	—	8 wagons, 130 m	240 t	564 t	120 km/h / 100 km/h
Samms flat wagon	180 m	up to 45 lengths 8,100 m	SAS / AAW	—	12 wagons, 200 m	360 t	846 t	120 km/h / 100 km/h
Loading systems		Loading speed (rail meters per hour)	Compatible transport system	Length over buffers	Weight	Delivery		Vmax
SLW		Loading and unloading: 5 pair/hour	Robel transport units	30 m	50 t	By rail		100 km/h
AAW with K class flat wagon		Loading: max. 600 m rail/hour Unloading: max. 7 pairs/hour	STS/railway-owned wagon	38 m	33 t	By rail		100 km/h
SAS with K class flat wagon and trailer		Unloading: max. 5 pairs/hour (120 m long rails) max. 3,5 pairs/hour (180 m long rails)	STS/railway-owned wagon	30 m	15,5 t	By rail		30 km/h set up and 15 km/h through turnouts

AAW Loading and Unloading Vehicle / SAS Rail Unloading System / SLW Rail Loading Wagon / STS Rail Transport System

Global expertise
in over 100 countries



Also get to know our portfolio in rail maintenance
and turnout services!

