

A large yellow track correction machine is positioned on the tracks inside a tunnel under construction. The machine has a control console with a laptop and various sensors. Several workers in orange safety gear are visible in the background, working on the tracks. The tunnel walls are made of concrete segments, and the tracks are laid out in a straight line towards the end of the tunnel.

CUSTOMISED SOLUTIONS: TRACK CORRECTION MACHINE – CROSSRAIL, LONDON

Crossrail project, London, UK

The Crossrail project is currently Europe's largest infrastructure project. Goal of the project is the creation of a new railway line starting in the west of London (Reading / Heathrow) and ending in the east (Shenfield / Abbey Wood).

The railway line consists of 42 km of new tunnels with 10 new and 30 existing / upgraded stations. The new line will be fully integrated with London's existing rail and metro network. Once in service in 2018 the line will be called "Elizabeth line" and is estimated to transport 200 million passengers per year.

Construction of new railway line

Location

London, UK

General Information

Railway tunnel length	2 * 21 km
Excavation method	TBM
Station tunnel length	14 km
Excavation	~7 million tons of material

Commissioning	2018
Passengers	200 Million per year

Challenges

- Demanding schedule makes it necessary to speed up the construction process
- Replace conventional methods with a reliable and accurate semi-automatic positioning system

Tasks

- Rough positioning of track 10 mm below design with Fassetta LNR track lifting machine using a customised Amberg positioning system
- Fine positioning of track with the Amberg VMS 1000 twin trolley system

Client and Contact Person

TSO as part of the joint venture atc



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Object

- Two parallel single-track railway tunnels with slab track
- 40 new or upgraded stations

Construction costs 14.8 billion £

Our Service

- Amberg Rail with customised measurement module
- Relative positioning system using an Amberg Profiler 110 FX
- Real-time correction data to position track accurately

