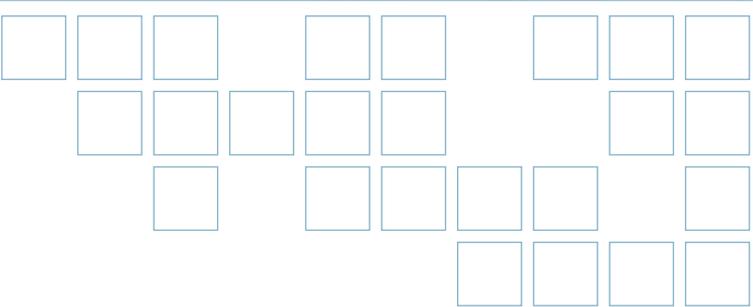


EXEL INSULATED RAIL JOINTS



Fail safe function in combination with cost saving is your goal

You and Exel have the similar target. Signal failures are too often the reason for delays in traffic, causing problems not only for the maintenance but more important, for the passengers. The Exel joints have the highest possible electrical insulation properties, and due to the design and material they are practically fail safe with respect to insulation. The mechanical strength in the fishplates is very similar to the rail. Fatigue resistance is far above the fatigue resistance for metals. All this in combination with a simple design using a minimum number of parts, easy and fast installation without the need for handling chemicals, welding, or detergents gives you a total cost saving.

Quality

Being one of the leaders in the use and design of high quality composite materials, we know the demanding requirements of the manufacturing of products for

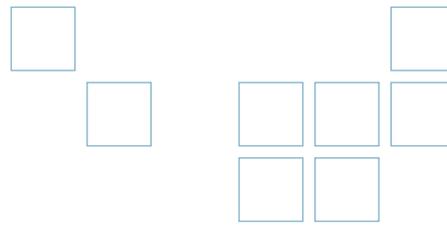
the railway industry. In fact you can see the difference in quality and structure already by looking at an Exel joint.

Exel is using materials to highest quality standards, and the structure of the material is optimised for insulated rail joints. The in-house developed manufacturing method and materials are constantly monitored.

Exel insulated rail joints are manufactured to highest quality standards according to ISO 9001.

Design and available specifications

The design is based on extensive research and testing and the know-how obtained has been proven over years of successful installations of thousands of joints in climate from tropical to arctic. The range available is covering joints for UIC 60 welded track used in the main lines to special joints in small series for jointed track. Due to the special design and strength a four hole configuration is normally recommended, but six hole joints are also supplied.



Special joints, as sample Emergency repair joints, distinctively coloured for attention. Weight per joint appr. 20 kg.

Standard joint

This joint type is used in jointed track and positions where longitudinal loads are limited. It is frequently used to replace plastic coated steel fishplates or fishplates with a plastic insulation liner or even wooden joints. Exel gives you a trouble free solution that will last.

CWR joint

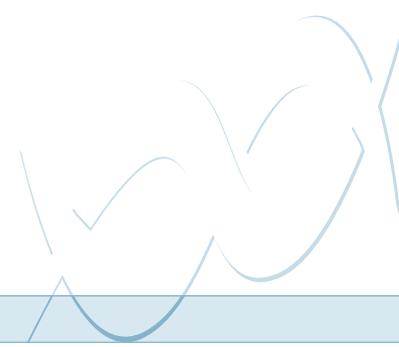
The design and testing is made in order to meet the requirements for use in continuously welded track. It meets the operational strength requirements for heavy traffic and high climatic and temperature loading in welded track. The CWR joint is used instead of "glued joints" as an easier and more cost effective solution. More than ten years and thousands of joints in use has proven the design and strength. The time needed for installation is approx. 20 minutes including drilling operations.

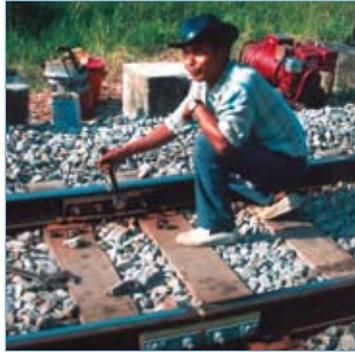
Special installations, underground and tunnel installations

The simple installation of the Exel joints is an obvious advantage in tunnel and underground installations. No smoke, no chemical fumes, no fire risk, makes it an ideal solution. The fast installation limits the track time needed to a minimum.

Exel joints in turn outs will prove a valuable solution. Maintenance of the turn outs is easy because the joints can be opened and reinstalled, no need to damage an existing joint because of maintenance of other track components.

Send your present specification or the design of your rail - sleeper configuration together with information of axle loads and allowed speed, and get the best solution based on our wide know-how of joint design





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