

The above mentioned fastening systems have the elasticity required for mainline slab tracks and high speed lines. The integrated elastomer and its design are of enormous importance, particularly in the case of the slab track, which has to perform without the “elasticity” of the ballast. As exemplary tests of two different stiffnesses have shown, the rail depression can be increased by 20 % and the dynamic wheel/rail contact forces reduced by more than 50 % by means of an elastomer with a dynamic stiffness of approx. 26 kN/mm compared to 45 kN/mm. Consideration of the insertion loss also shows significant differences in this respect.

Reduction of vibrations and maintenance of the track, especially in sometimes difficult surroundings, is important on high speed lines but just as much on the tracks in and under our cities.

The experiences from the main line tracks are integrated in developments of fastening systems for tram and metro lines. Further slab track fastening systems for the installation with sleepers as e.g. Systems 300 UTS or System W25 DD or on level slab as e.g. System W-Tram, are available for light rail applications.

- For more information:
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Fig. 4 : System 300 UTS



Fig.5: System W-Tram

Heavy Load, Concrete Road

Admirable foresight was demonstrated in the planning of Britain's post-war recovery as shown in this photograph of a Liberation class 2.8.0 locomotive, the transporter carrying it and also the A580 road being travelled. The picture was taken in 1946. The loco was one of 25 from the Vulcan Foundry at Newton Le Willows sent to Poland, Yugoslavia and Czechoslovakia; largely at the behest of British intelligence which predicted during the war extreme difficulties for East European railway systems once the Germans pulled back. The transporter tractor – a solid tyred, chain driven Scammell – was one of a number ordered by specialist haulier Edward Box. This company in the mid 1930s was anticipating movement of heavy loads to Liverpool's huge new dock along the East Lancs Road (A580), which had been built wide, in concrete and with sufficient head room to suit. **Robert Baldwin**



New High Speed Link Is Essential

New plans for a high speed rail route linking London with Glasgow have been forwarded by a new report by consultants Atkins. The new line is required to prevent chronic overcrowding on the rail network that could result in the network becoming unmanageable in as little as ten years.

The report builds upon work previously carried by Atkins between 2001 and 2003 on behalf of the now defunct Strategic Rail Authority. This found that rail capacity could be exhausted far quicker than the government is anticipating, making the planning of a new high speed line a matter of urgency.

The new plans outline a link from London, through the East Midlands and connecting with the East Coast Main line in Yorkshire and then onto Newcastle, Edinburgh and Glasgow. It is estimated to cost £31 billion and would generate economic benefits of over £60 billion over 60 years. Using the Department for Transport's standard growth forecasts, Atkins believes that the new high speed link would be required by 2026 but using the growth forecasts of the train operators it will be needed considerably sooner than that. In that case planning for the new link is required sooner rather than later.

