

The importance of clearing gauges: catering for high cube containers on the British Rail network

ROBERT GOUNDRY REPORTS
ON A REAL CHALLENGE TO
BRITAIN'S RAILWAY - BUT IS
CONFIDENT THAT VIABLE
SOLUTIONS CAN BE FOUND

When Freightliner first started carrying ISO containers by rail in 1965, the International Standard was for a container to have an 8' square section with lengths in 10' modules. With a little bit of work, most of the main railway lines in Britain could be cleared to carry boxes of this size, and the world's shipping lines began to build ships with container width guides set at eight-foot intervals. As road height regulations became more relaxed around the world, pressure grew to increase the cubic capacity of maritime containers, and before long container height grew six inches - the width could not increase without rebuilding all the ships used to carry the units across the oceans. With a little more difficulty and expense some - but by no means all - British main lines were cleared to allow the passage of containers of the increased height, and Freightliner's maritime container business continued to grow.

But pressure to increase cubic capacity goes on, especially as the average density of the goods carried in international trade goes

down, and traders are anxious to take advantage of the relatively generous road heights allowed in many countries, including the United States and Great Britain. More and more maritime containers are now built to a height of 9' 6", although the width is still held to 8'; some 21 per cent of the international container inventory is now of this size, and the proportion is increasing by three per cent or more a year.

Containers measuring 9' 6" present a real challenge to Britain's railway. The early railway engineers built the system to accommodate relatively small vehicles - something they put right when they later worked in mainland Europe - and on most routes, 9' 6" containers can only currently be carried on special wagons with low platforms; whether with special small wheels or wells between normal wheels. Such wagons can be expected to cost more to build and/or maintain than conventional designs; while they have length and/or weight restrictions that seriously constrain their earning power, they cannot produce enough income to match their costs.

The only feasible solution is to increase the loading gauge so that 9' 6" containers can be carried on conventional wagons and, for this purpose, the W10 gauge has been specified to accommodate such boxes on wagons that have a load

platform height of no more than 1000 millimetres. Fortunately, many routes electrified on the 25 KV AC system have already had many bridges and tunnels reconstructed to accommodate the electrification, and this eases the situation - the West Coast Main Line (WCML) has already been cleared for W10 between Wembley, Liverpool and Coatbridge in Lanarkshire, for instance. But the routes from the main container ports to the West Coast line are not clear, and other clearances are needed to serve such important destinations as Birmingham, Manchester and Leeds.

The Strategic Rail Authority realises that, without investment, it is not long before the proportion of 9' 6" containers in the world fleet will rise to the point where rail's ability to carry maritime containers in Britain will start to fall, thus losing the environmental and social benefits that rail provides, as well as preventing the growth envisaged in government targets. These potential losses justify significant investment in gauge enhancement on the network, and the SRA has authorised the work needed to link the country's largest container port at Felixstowe to the WCML, as well as upgrading the lines connecting the WCML to Birmingham and Manchester. The largest single project in this scheme is the enhancement of Ipswich Tunnel

(the world's first tunnel to be built on a curve), including the replacement of the life-expired slab track. Adding Tilbury to this network is relatively easy to achieve; much more difficult will be producing value-for-money business cases to connect the major port at Southampton and the important demand centre of Leeds.

However, Freightliner is working with other industry parties to show how this can be done, and as more is learnt about what precisely needs to be done so we are confident that the costs can be made manageable, and we are optimistic that viable solutions can be found.

A risk area is to find suitable commercial and technical strategies for dealing with alternative routes, since it is unlikely that the available environmental benefits will justify the improvement of every diversionary route presently in use. Rescheduling track maintenance and train loading patterns will need to become the norm in these cases.

For the future, we can take some comfort from the likelihood that even higher boxes are relatively unlikely to appear - many countries in mainland Europe (where roads are to built for double-decker buses) already find 9' 6" containers a problem, while the Americans could not easily double stack bigger containers on their trains.

Robert Goundry is director of strategy at Freightliner Group

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MEMBERS' NEWS

Corporate Membership

The following employers operate a Corporate Membership scheme, by paying a one-off annual fee which covers all their employees' Affiliate or Associate membership subscriptions. (Those with full membership will continue to pay their subscription personally, irrespective of whether they can subsequently claim it back from their employer through expenses).

Network Rail, Eurostar, Wales and Borders, Central Trains, Iarnród Éireann, Northern Ireland Railways, Freightliner Virgin Trains, First North Western, First Great Eastern, one Great Western, Go-Ahead Group, Transport for London/LUL, Docklands Light Railway, Thames Trains, South Central, Thameslink, Stagecoach Rail, London Lines, GB Railways, Sheffield Supertram, one WAGN, one Anglia, Island Line, Silverlink Trains, Hull Trains, South West Trains, c2c, GB Railfreight, EWS Railway, ScotRail, South Eastern Trains, Corus Rail Consultancy.

The Institution is delighted to welcome Eurostar as our newest Corporate Member and supporter.

DIARY OF EVENTS

MIDLANDS AREA

The date of the next meeting is Monday 26 May 2004.

For information on all Midlands Area events, please contact Julia Stanyard on 0121 345 3091 (PLEASE NOTE CHANGE OF NUMBER) or e-mail us at Midlands@railwayoperators.org

SOUTH EAST AREA

The next meeting is on Monday 24 May 2004; Ray Price, operations director at Arriva Trains, will speak.

All meetings take place at the Union Jack Club, Sandell Street, Waterloo. Doors open at 18:00 and the talks commence at 18:30.

To contact the South East area on any subject please e-mail: Southeast@railwayoperators.org

NORTH EAST AREA

There will be a visit to Neville Hill depot on Tuesday 4 May. Meet at 17:45 in front of WH Smith on Leeds station concourse for minibus to/from depot. Stout footwear is required - other PPE will be provided on site. Places are limited, so it is essential that you e-mail mike.hogg@ews-railway.co.uk if you wish to attend. Places will be confirmed by e-mail. Return to Leeds station by 20:30.

North East Area meetings normally take place at 17:30 for 18:00, at York, and full details will be published in advance each month in this column. For further news on the IRO in the North East contact us at: Northeast@railwayoperators.org

SCOTTISH AREA

For information on Scottish events and matters phone Jim Summers on 01324 625284 or e-mail: Scottish@railwayoperators.org

SOUTH WEST AREA

An all-day Saturday event has been arranged for 22 May, to visit Mendip Rail, and Merehead Quarry operations near Cranmore, meeting at Westbury for road transport. Lunch will be at a suitable location in the Merehead area.

Please put this one in your diaries - full details will be sent out to South West Area members and any others

People are talking about what's happening



at Westinghouse Rail Systems.



that get in touch to express an interest. For information on all South West events and matters, contact Lawrie Hall, internal 07 79307, mobile 07771 827797 or e-mail us at Southwest@railwayoperators.org

NORTH WEST AREA

The next meeting will be on Wednesday 26 May, at 18:00 for 18:30, and will feature a visit to Longsight Depot.

Future meeting dates are as follows:

- Wednesday 15 September
- Wednesday 17 November

Ken Wilson, a member of the Institution in the North West, writes: 'First of all I would like to express our thanks to the guest speaker, Tom Birch, at the meeting on 24 March.

Tom Birch is the Board Member of the Institution with responsibility for pushing forward the education and development of our members, which is one of our prime objectives in creating a safer and more knowledgeable operation. Tom's talk was very clear, and gave some food for thought for each of us who wants to advance to a higher level within the Institution.

A number of problems have been

overcome in what most would think an easy task of establishing an education programme. Tom gave an interesting view of the 'Teacher Roles' that will provide us with the grounding we need to achieve greater knowledge in the operational field.

Thanks to Network Rail North West, for providing the venue and a buffet.

On a more serious note, the number of members attending this meeting was what I can only call 'small'. I call on all of our members to attend and support these meetings; if we have four or five meetings a year then all of us should try to attend at least three - and not the opposite, only attending one and missing the rest.

We need to drive up the membership with our colleagues, to show that we wear our heart on our sleeve and are proud to be part of an institution that is fighting for our benefit. There are hundreds of people with an interest in the safety and operations, light rail, heavy rail, over and underground. Lets all push together. Put the dates for the rest of the year in your diary now - and come on, support the institution!

For details please contact: Clive Evans on 01270-629009 or e-mail: Northwest@railwayoperators.org