

Editorial

Since the constitution of EFRTC (European Federation of Railway Trackworks Contractors) in 1997, a relentless work has been carried out by the former Presidents, Mr. Werner Schmidt-Weiss and Mr. Loïc Perron in order to promote and develop EFRTC.

As mentioned by Mr. Loïc Perron, in the first edition of the newsletter that he promoted, the EFRTC shall give his contribution to the harmonisation of rail track quality and maintenance required by the Infrastructure Controllers, as well as to the procurement procedures in railway trackworks.

In addition to this it must be taken in to consideration that the Infrastructure Controllers are called to reach a financial balance according the European Directive 91/440/CEE. In order to reach this target, transport activity must be increased, which will result in a reduction of time for track maintenance works and therefore an optimisation in the organisation of these works.

At the present moment the above mentioned conditions cannot be met, because the track maintenance works are split up and carried out partly by the Infrastructure Controllers, and by private contractors. Previous experiences made in some EU countries have shown that a considerable cost reduction can be obtained by granting all the railway track maintenance works to private contractors, reduction that shall be more important as soon as we will have interoperability in the conventional transeuropean railway system.

The following actions must be taken :

- All the track maintenance works should be carried out at the same time by private contractors under safety and quality check of the Infrastructure Controllers.
- Elaborate a European standard for the qualification of trackworks contractors and of the specialised personnel for the execution in safety conditions of the trackworks. This will facilitate the tender procedures to the Infrastructure Controllers.
- Reduce as much as possible national conditions concerning the circulation and working conditions of the rail track construction and maintenance machines. This action will allow the trackworks contractors to operate with their own machines in all the EU countries.
- Harmonise the EU procurement procedures and the trackworks price list elaborated by the Infrastructure Controllers.

The EFRTC shall promote these actions in full collaboration with the Infrastructure Controllers.

Attilio Rossi, President EFRTC

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QUALIFICATION OF RAILWAY TRACKWORKS CONTRACTORS

The EU directive 93/38 co-ordinating the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors, foresees in article 30, that the contracting entities may establish and operate a system of qualification of suppliers, contractors and services providers. They shall use European Standards as reference where they are appropriate.

The EFRTC which has as main objective the harmonisation of the working conditions and impart technical innovation and improvements in quality and safety, has promoted the elaboration by the CEN of a standard for the qualification of railway trackworks contractors.

The main criteria's of the qualification system will be:

- Administrative and legal;
- Financial;
- Technical.

Concerning the technical criteria the qualification by specialised category and related classification, considers the:

- Nomenclature of trackworks activities;
- Technical ability and capacity;
- Classification by size of contract;
- Qualification of the trackworks personnel.

One of the major criteria is the technical capacity, were the contractor is considered to be suitable for tendering for contracts of a certain size if he is the owner of the necessary trackworks machines and qualified personnel.

In relation to the qualification of the personnel, it must be mentioned that the UIC – Security platform, is facing this problem and will probably elaborate a specific standard.

The SKB which is an association of the procurement directors of the European Railway Companies, Operations and Infrastructure has decided to harmonise the qualification codes under the utility directive and to create a Working Group for the qualification of trackworks contractors.

SKB is taking as an example of a qualification system, the RFI and the Railinfrabeheer qualification codes, and is also taking in consideration to join EFRTC in a working group of the CEN in order to elaborate a European standard.

To be noted that one of the main advantage of a European standard for the qualification of railway trackworks contractors is to facilitate the work of the Infrastructure Controllers for the selection of the bidders for the call for tenders of track maintenance and construction.



UIC ACTIVITIES REGARDING SAFETY IN RAILWAY TRACK

Rail traffic safety ranks highly in the numerous activities of the UIC (International Union of Railways). For this reason the UIC Safety Platform was created in 1999, by order of the UIC coordination group, in which the safety directors of various European railways are represented.

The tasks of the Safety Platform are to:

- lend a new orientation to UIC tasks in the area of safety,
- draw attention to real, priority issues of the railways in the area of safety
- promote an open exchange of views in a climate of trust between train safety directors.

The Safety Platform does not form an institutional component of the UIC, but rather is more or less a discussion / working committee that takes up safety issues, processes and forwards them on to the appropriate committees of the UIC.

Resulting from the seminar of UIC safety directors at the end of 1999, six activities in total were initiated, taking into account the important actual aspects of safety.

These include:

- Supplementation of the UIC databases
- Mirror group to the EU / campaign with regard to the legislator
- Control of safety at the technical interfaces
- The human factor
- Corridor: safe over the borders and
- Staff qualification



These subject areas are being developed at present by six working groups for the Safety Platform of the UIC.

The activities of the UIC in the field of staff qualification are being followed attentively and with the active co-operation of the EFRTC. In this way, the staff qualification working group has also a mandate for the qualification of the personal of railway trackworks contractors that are active across frontiers. In addition to the representatives of the 5 European railways, EFRTC also participated in these meetings of the working group as an observer in order that the interest of the European trackworks contractors be taken in consideration and to be able to take account at an early stage of any relevant developments in the field of safety, which may have repercussions for the railway trackworks contractors.

Against the backdrop of the Europe-wide discussion of a driving licence engine drivers, the work at present is concentrating selectively on developing recommendations for the basic requirements necessary for driving selfpropelled construction and maintenance machines. The distinctive features of the movement of these machines in and to the work site area are appropriately acknowledged, including the requirements for longer transit routes, such as, for example, in transport.

Additionally, recommendations on the minimum qualifications of the staff for trackworks on the work sites are defined with special consideration of the respective area of responsibility.

In this way, the recommendations on the minimum requirements of these workers should vary, for example, from very simple activities to highly complex problem definitions.

Insofar as possible, requirements/recommendations already defined under consideration of the activities of the CEN in elaborating a European standard for the qualification of trackworks contractors and of their staff as well as of the requirements for engine drivers described in the GEB study will be developed further.

The work should be finished by the end of 2001 and subsequently presented to the safety platform to decide on the further mode of action.

Mr. Gerd-Erich Löwer – DB Netz AG
Chairman of UIC Working Group

EFRTC WEBSITE
<http://www.efrtc.org>

Member News

A NEW EMBEDDED RAIL SYSTEM

Balfour Beatty Rail has developed a new embedded slab track system (inventor Charles Penny) which provides greater safety and quality of ride, lower maintenance and life cycle costs and enhanced structure gauge clearance. The new 74kg/m rail, pad, shell and seals are embedded in a low profile reinforced concrete track slab.

Tests carried out by the Technical University of Munich show exceptional resilience results and bi-axial load fatigue performance. The pad resilience can be tuned according to the client's requirements for noise, vibration and ride quality.

The system has been designed to provide the best possible safety. The continuously embedded rail is less susceptible to lateral buckling and fatigue problems such as rolling contact fatigue. The unique design of the concrete slab incorporates a derailment guard in the optimum position for maximum protection.

The track slab can be placed on a suitably prepared formation, ready to accept the rail subsystem and any required track furniture.

The system requires virtually no on track maintenance and the full rail section can be ultrasonically scanned from the head.

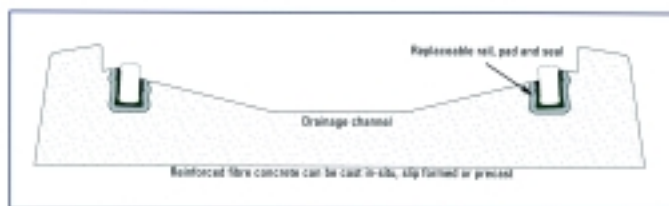


New rail sub-system



In the event of excessive rail wear or a breakage, the rail, pad and seals can be removed for replacement. The pad and seals have shown no wear after 5 million test cycles.

The reduced maintenance requirement considerably increases the availability of the track for revenue traffic. The stability, durability and gauge retention properties of the system and low system height are ideal in tunnels or under bridges and where reduced structure gauge clearances are required.



Track slab cross section

Rail Type	BB14072
Weight	74 kg/m
Surface profile	UIC 60
Pad	
Static Resilience	18.0 kN/mm/650n
Dynamic Resilience	21.9 kN/mm/650n
Speed with 22T axles	300-330 kph
30T axles	120 kph
Restraint	
Longitudinal	23kN/m/rail
Vertical	38kN/mm/m/rail
Concrete Slab	
Depth from top of rail	370mm
Concrete grade	50MPa
Reinforcement	Steel bar and fibres
Head elastic deflection under load	
Rotation	less than 0.2 deg
Horizontal	less than 1.5mm
Vertical	less than 2.0mm

For any further information, send an email to vernon.turnbull@bbrail.co.uk.

BALLASTLESS TRACK EXPERIENCE IN FRANCE

The French concept of the ballastless track consists of a plain track with rails on bi-block concrete sleepers which is embedded in a second-pour concrete.

The noise attenuation is provided by resilient materials located in between the concrete blocks of the sleepers and the concrete slab.

In general, there is no provision for later adjustment of the track geometry either vertical or horizontal. The track must therefore be very carefully adjusted, controlled and accepted before pouring the concrete. This type of track was first experimented in the 1960's by the Paris Metro Authority in view of the construction of new express metro lines, with speeds up to 110 km per hour.

A similar concept, although using independent concrete blocks instead of bi-block sleepers, has been successfully implemented for the construction of the tracks for the Channel Tunnel where speeds reach 160 km per hour.

Lately, an improved design of the same concept, using rigid hull around the sleepers blocks with much tighter manufacturing tolerances, was chosen to built the track in a TGV Méditerranée tunnel. This section being closed to Marseilles terminal station, the speed of TGV trains is about 240 km per hour.

For that kind of speed, long waves defects in geometry could be tolerated, but it won't longer be acceptable for speeds 300 km/hour or more.

For imaging the difficulty, one can say that the tracks for the express metro lines were laid within few millimetres, the track in the Channel Tunnel within a millimetre, and we have now to look after an accuracy down to the tenth of millimetre.

What a goal for track laying specialists.

As part of the reform of the Swiss Federal Railways, their Infrastructure Division publishes invitations to tender for railway projects. At first, these invitations were also answered by internal Swiss Federal Railways maintenance departments in charge of renewal works and projects (UE/GUP). Lately, the Swiss association of railway construction and maintenance contractors (Vereinigung Schweizerischer Bahntechnikunternehmen VSBTU) obtained confirmation from Division Management that internal organs of the Swiss Federal Railways will not participate as direct providers to these tenders any more, in order to safeguard undistorted and fair competitive conditions. The maintenance departments (UE) can only appear eventually as sub-contractor of private companies, providing them with special services, equipment and systems such as catenary assembly, cranes, switch transportation systems, etc.

This development improves both fairness of competition and good collaboration between private companies and the Swiss Federal Railways Infrastructure Division.

THE WHITE PAPER ON TRANSPORT PUSHES FOR MORE RAIL INFRASTRUCTURE

The European Commission advocates in its recent White Paper on Transport Policy (september 2001) the need for a modal shift in transport, from road to rail and waterways. This is imperative due to the congestion of the road network which will not absorb the expected growth in transport needs, and from an environmental point of view.

Therefore, the European Commission supports the revitalization of rail, in order to increase its share of passenger and especially freight transport.

As a matter of fact, the Commission supports the development, when possible, of railway tracks devoted solely to freight transport. This should bring increased investments in railway infrastructure, and to an improved market environment for railway trackwork contractors.

The first visible result is the decision on the 19th of September of the European Commission to allocate 640 millions euros to solve railway bottlenecks. The designated projects comprise the project of a rail link over the Fehmarnbelt, increasing the safety in the Frejus tunnel, improvement of rail and river connections between Germany, Poland and the Czech Republic, measures to increase the capacity on the Community side of the new Alpine crossing rail projects in Switzerland.

THE FUTURE OF THE RAIL INFRASTRUCTURE IN GERMANY

At the annual general meeting of the Überwachungsgemeinschaft Gleisbau e.V. (Trackwork Supervisory Association), a panel discussion took place on 20.09.2001 in Stuttgart with the topic "The future of the rail infrastructure in Germany". High ranking representatives from the politics and the ministries participated as experts.

Modal split

In the last decades, the railways have fallen farther behind the traffic carrier road. Present forecasting shows that passenger traffic will increase about 20% and freight traffic up to 64% in Germany by 2015. All participants agreed that this growth of traffic could only be handled when the railroad takes on a significant portion of this traffic. With a doubling of the transport role of the rails, its portion in Modal Split would be 24% in the area of freight traffic and 9% in passenger traffic. Here it is, however, necessary to use the rail infrastructure optimally and to expand it efficiently.

Financing the rail infrastructure

Politics and the ministries have been successful in increasing the investments for the rail network to 4,5 billion Euro per year. Additionally, 1 billion Euro per year for the next 3 years has been allocated for maintenance of the existing network. The costs for maintaining the rail network will be borne by the DB AG itself. All sides criticised the fact that, because of planning bottlenecks, the DB AG even in this year is not able to fully utilise the available funds.

Division net and company

Although the participating politicians of the CDU, SPD and Grünen were unanimous in recommending a strict separation of network and management, one can assume from the comments of Transportation Minister that the Task Force will recommend keeping the rail network within the DB AG. Through establishment of an additional authority, non-discriminatory access to the rail network will be insured.

Overall, the political institution is bound by § 87 of the German Constitution to insure appropriate transport services for the common good.

Regionalization

In accordance with the regionalization law, the 16 German states receive 7 billion Euro per year for local passenger traffic. This should insure adequate regional service and provide for flexible decisions at the local level. The initial responses and actions have been very promising. Local railroad service firms have been increasing; they represent, however, only a small part of the market at this time.

Infrastructure construction and maintenance capacities of the DB AG

One of the main problems is the discriminatory release of contracts to companies belonging to the DB AG. All participating politicians favoured fair procedures for issuing contracts so that lowest bidders could procure such contracts thus providing more efficiency in the rail system. If the DB AG's infrastructure construction and maintenance capacity is to remain within the DB AG in the future, then, according to the general consensus of the politicians, this institution must be exposed to harder service and pricing competition.

In summary, all participants recognised their responsibility and predicted a good future for the rail system.

Infrastructure Investment

TRANS-EUROPEAN TRANSPORT NETWORK 2001 - 2006

The European Commission adopted on the 19th of September a decision on the Indicative Multiannual Programme for the funding of the Trans-European Transport Network over the 2001 - 2006 period. After assessing all bids received, the Commission allocates EUR 2,78 billion to successful projects. Nearly 50% of this amount will go to the large infrastructure projects endorsed by the 1994 Essen European Council, 20% will go to the Galileo programme, the rest being shared between various railway bottlenecks, cross-border projects and Intelligent Transport Systems. "The selected projects will contribute to meeting our key transport policy challenges as outlined in the Commission White Paper on Transport adopted on 12 September: shifting the balance between different modes of transport, fighting bottlenecks and congestion and placing quality and security at the heart of the common transport policy." said Vice-President Loyola de Palacio, Commissioner in charge of Energy and Transport.

The total amount is therefore distributed as following:

- EUR 1,3 billion (47%) to infrastructure projects endorsed by the 1994 Essen European Council;
- EUR 550 million (20%) to the Galileo project;
- EUR 640 million (23%) to railway bottlenecks and cross-border projects;
- EUR 280 million (10%) to Intelligent Transport Systems (ITS) projects for the road and air sectors.

EIB LENDS EUR 190 MILLION FOR HUNGARIAN RAILWAY MODERNISATION

The European Investment Bank (EIB) is lending EUR 190 million for the modernisation of the rail network in Hungary. The funds will mainly help modernise three rail lines emanating from Budapest that lie on the pan-European rail corridors IV and V and which link Hungary to Austria (Corridor IV), Romania (Corridor IV) and Slovenia (Corridor V) as well as the Budapest-Lvov (Ukraine) line.

Of the total amount, EUR 60 million are lent directly to MAV, which is the operator of the national railway system and the remaining EUR 130 million will be channelled to MAV via the Government, the owner of the railway infrastructure.

Works mostly comprise track rehabilitation, improvements to the power supply systems and signalling equipment as well as the redesign and upgrading of stations. Investments will allow higher speeds for international and national freight and passenger traffic, in line with the objectives of Hungary's Accession partnership. The EIB is co-financing the investments with ISPA, the EU's special grant aid programme for furthering transport and environmental schemes in the Accession Countries.

Conferences & Seminars

**November 25-29, 2001 – Köln,
Germany**

**WCRR 2001: World Congress on Rail-
way Research**

**December 5-7, 2001 – Basle,
Switzerland**

**International Exhibition of Equipment,
Systems and Services**

**April 15-18, 2002 – Amsterdam,
The Netherlands**

**Intertraffic – Cost Effectiveness of Rail
Infrastructure**

**June 12-14, 2002 – Nantes,
France**

UITP Light Rail Conference

**September 24-27, 2002 – Berlin,
Germany**

Innotrans Exhibition

**October 23-25, 2002 – Madrid,
Spain**

**Eurailspeed 2002: 4th World Congress on
High Speed Rail**

Structure of EFRTC

EFRTC was founded in 1997. Membership consists of national federations or where these do not exist national co-ordinators, representing the majority of specialist trackworks contractors for countries that are member of the European Union (EU) or the European Free Trade Area (EFTA). National Federations and Co-ordinators from other countries may be admitted as associate members.

EFRTC OBJECTIVES ARE AS FOLLOWS:

- Harmonisation of procurement procedures (call for tenders).
- Exchange of information about the European railway networks.
- Forum for information about new technologies and systems.
- Development of quality standards for track construction and maintenance.
- Improvement of technical competence and safety standards
- Financing of rail track construction projects.

THE EFRTC BOARD 2001 – 2002

The EFRTC Board of seven officers. To assist the Board a Secretary-General is also designated :

From left to right:

Rolando Naggar, Secretary General,
 Jean-Claude Guedé, Treasurer (France)
 Jorge Miarnau Banus, Vice-President (Spain)
 Loïc Perron, Honorary President (France)
 Attilio Rossi, President (Italy)
 Urs Zinsli, Deputy Vice-President (Switzerland)
 Jeremy Candfield, Deputy Vice-President
 (United Kingdom)
 Dieter Schreck, Deputy Vice-President
 (Germany)



EFRTC STUDY GROUPS (JULY - DECEMBER 2001)

STUDY GROUP	SUBJECT OF STUDY TODAY
International tendering Chairman: Mr. D. Schreck (Germany) E-mail address: dieter.schreck@schreck-mieves.de	“Outsourcing of Railway Infrastructure Maintenance”
European affairs Chairman: Mr. L. Perron (France) E-mail address: lperron@tso.fr	“Opening-Up of Public Procurement for Railway Trackworks”
Circulation of construction and maintenance machines Chairman: Mr. J.C. Guedé (France) E-mail address: guede@seco-rail.com	“Railway Equipment Maintenance Commission”
European standards Chairman: Mr. R. Naggar (Italy) E-mail address: aniaf.99@flashnet.it	“Qualification of Railway Trackworks Contractors”
Railway trackworks Chairman: Mr. R. Naggar (Italy) E-mail address: aniaf.99@flashnet.it	“Turn key project of track maintenance”