

1999 STS ---- CONFERENCE on “WHEEL/RAIL INTERFACE”

The 1999 STS Conference, Wheel/Rail Interface, was held in Moscow, Russia on June 14 through 17th, 1999. The IHHA host member was the All Russian Railway Research Institute, a Department of the Ministry of Railway Transport of the Russian Federation. The subject of this Specialist Technical Session (STS) meeting was to merge the best state-of-the-art technical knowledge with practical consideration to guide the selection of materials, design criteria and maintenance practices for optimal selection of wheel and rail systems matched to varied heavy haul services and operating conditions. To codify in a definitive manual of best practices the selection criteria correlated to operating conditions, for the implementation of effective wheel and rail strategies over the range of heavy haul conditions and environments.

The conference addressed the following areas;

1. Wheel Performance, wheel steels, wear and fatigue considerations, maintenance practices, lubrication, influence on wheel performance, and the dynamics of wheel/rail performance.
2. Rail Performance, rail steels, wear and fatigue considerations, rail grinding, and rail lubrication on the influence of rail performance.
3. Influence of track and rolling stock on wheel/rail performance.
4. Influence of high axle loads on wheel/rail performance.
5. Measurement systems, methods and instruments for diagnostic evaluation of track and rolling stock, wayside and on-board systems, measurement of wheel/rail geometry, angle of attack, and wheel/rail friction coefficient.
6. Optimizing wheel/rail performance on economic criteria.
7. Future directions of research in wheel/rail performance.

The IHHA host member director was Prof. Alexander L. Lisitsyn, General Director, All Russian Railway Research Institute. Dr. Lisitsyn was also the Conference Chairman. Prof. Evgeny A. Sotnikov was the Conference

Manager. The conference was held over a four-day period, which included a technical visit and presentations on June 15th at the All Russian Railway Research Institute Test Center at the Sheherbinka Railway Station.

The Conference Proceedings are divided into two volumes. The first volume contains the majority of papers presented for the four conference sessions which were held at the Renaissance Hotel in Moscow. These sessions were as follows; The Definition of the Problem of Wheel/Rail Interface, Track/Rolling Stock Interaction, Wheel and Rail Performance, and Cost and Safety Optimization of Wheel/Rail Performance.

The second volume of the conference contained papers of Russian specialists intended for the presentations at the session held at the Test Center of the All-Russian Railway Research Institute at Sheherbinka.

Based on the presentations at this conference, the Technical Review Committee (TRC) developed the basis of the Best Practice Guidelines for the manual on Wheel/Rail Interface Issues.

The bound proceedings of this conference contain a total of 78 papers and presentations for a total of 604 pages.