

### **Brake Systems Innovation**

Innovative technical methods and train brake systems have been implemented and are under trial operation.

The mobile brake integrity control system with automatic registration of measurements prevents the departure of trains with blocked end taps (which caused a collapse of freight trains on the Kuybyshevskaya Railway in 2010). In 2013, a pilot batch of devices will be delivered to the Northern Railway for trials under controlled conditions.

In cooperation with Knorr-Bremse (Germany) a new generation of brake control valve has been developed. Their production will be localized in Russia. In February 2013, the Federal Freight Company (a subsidiary of JSC "Russian Railways") and Knorr-Bremse established a joint venture, Knorr-Bremse 1520, for the production of brake equipment for railway rolling stock with a gauge of 1520 mm.