

The RATP Test & Measurement Laboratory, focus on the pantograph/OHL interface

One of the major challenges facing the operators and maintainers of urban public transport networks is that of mastering the quality of the interface between the pantograph and the overhead contact line. It is a challenge that remains constant throughout the different phases of the network's life, for any technical incidents arising as a result of problems with the reliability at this interface can have dire consequences for the companies in charge (disruptions to passenger service, loss of customer satisfaction, higher maintenance costs, etc.)

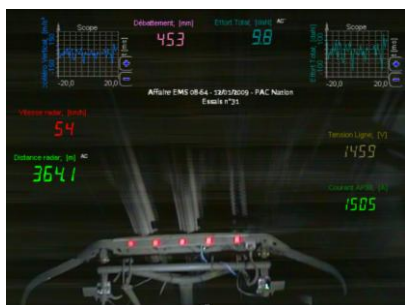
EFFICIENT METHODES

To meet the growing need to assess the quality of current collection, the technical skills and experience of the RATP Test & Measurement Laboratory have been channelled into developing modular, rapidly applicable on-board measurement methods that have proved their efficiency on all urban network configurations and on all the different types of rolling stock used on these networks (Tram, Tram-Trais, suburban rolling stock)

These methods are based on the most recent standards (EN 50119 and EN 50367) and on the considerable feedback accumulated by our laboratory.

SOPHISTICATED TECHNICAL RESOURCES

Our laboratory has developed cost-effective solutions associated with sophisticated technical resources to conduct synchronous measurements and perform real-time analyses of the main parameters involved in gauging the quality of the interaction between the pantograph and the overhead contact line:

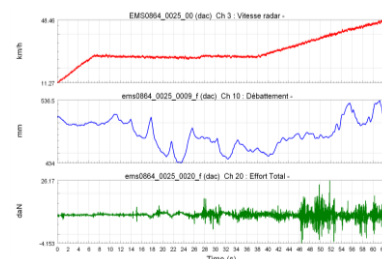


Measurements on board vehicles in passenger service

- Contact force exerted by the pantograph on the overhead contact line;
- Detection of electrical arcs;
- Pantograph dynamics (shocks, vibrations);
- Electrical voltage and current absorbed by the pantograph;
- Behaviour of the pantograph/overhead contact line interface observed via video cameras;
- Contact wire height and stagger in relation to the track;
- Verification of the pantograph and overhead contact line clearance gauge;
- Temperature in the pantograph contact strips.



Tram in operation on line T3 in Paris



Simultaneous recordings of train speed, vertical displacement of the pantograph frame and vibration in the bow

HOMOLOGATION EXPERTISE PREVENTION

The laboratory can play a part at all stages in the life of your network, from type approval of a new line to expert analysis and investigation of defects, via periodical inspections as part of your preventive maintenance operations. Contact us: we will be happy to provide you with further information and technical details.

For commercial issues

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