

RATP

From steel to **titanium** in full safety

To improve working conditions, RATP replaces steel by titanium in its coupling devices, while guaranteeing, of course, the same safety levels at use.

Each day, RATP's teams constitute works trains intended for the maintenance of the subway. This is a repetitive and physical task. As says Mr Bolmont *"because of the presence of the buffers in the train's axis, they must place themselves under the cars to raise and fasten the couplers."*

Safety first

That's why, in the last 10 years, RATP gradually replaced the steel couplers, which weigh no less than 36 kg, by titanium couplers weighing only 20. The couplers are designed to last 15 to 20 years. But titanium is more fragile than steel. It is thus essential to control regularly their integrity. At one of these controls, it appeared that some of them presented defects. They were immediately rejected.

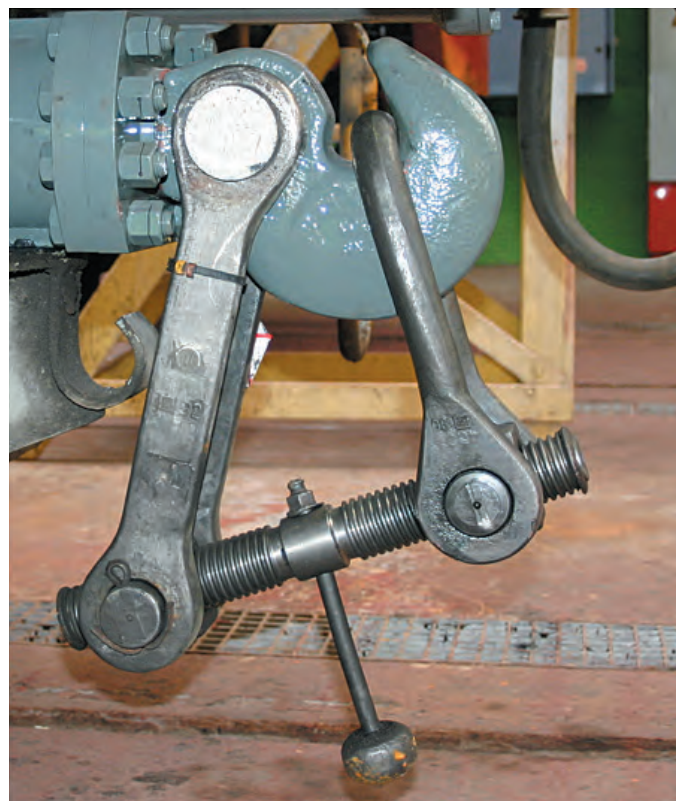
A revealing preliminary control

RATP asked thus its supplier to manufacture a new series of couplers and entrusted to Cetim the duty of validating

them before putting them in operation. The convergent observations of experts in computing, materials, fatigue, metrology and non-destructive testing showed that if the design was perfectly correct on the theoretical level, the realization did not measure up. The new couplers were not put in operation - what meant also longer deadlines and financial losses.

A reassuring process

To free RATP of concerns and new nasty surprises, Cetim worked out precise manufacturing specifications. A small batch of 4 specimens will be manufactured according to these specifications and tested in resistance and endurance at Cetim. The material will be



controlled. *"What I appreciate in Cetim's approach is that it's much securing to me"* admits Mr Bolmont.



Cetim's asset

With its wide technical and organisational skills, Cetim is particularly well placed to support and reassure the companies throughout the course of their project.

OUR CUSTOMER

Corporate name

RATP (Régie autonome des transports parisiens)

Sales turnover

3,7 billion euro

Workforce

44.000 people

Activity

Created on January 1, 1949, RATP is a state-owned company of commercial and industrial nature (in french, EPIC). It operates public transport in Île-de-France with four networks: bus, subway, RER (suburban railways network) and tramway