

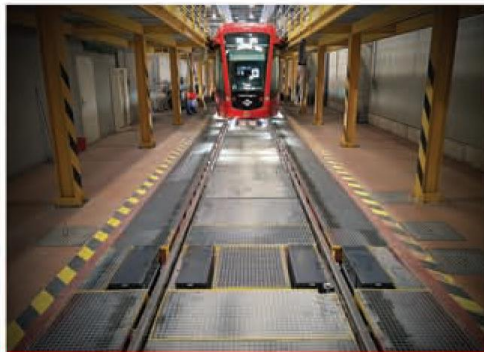
IWMS

Wheel Profile automatic measurement system

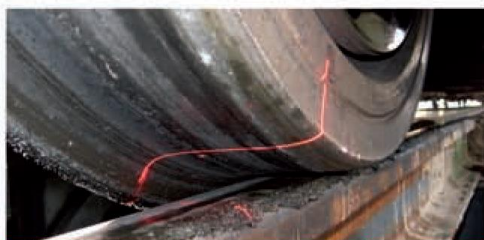




**IWMS installation
Outdoor system**



**IWMS installation
Indoor system**



**Contactless measurement
Based on laser-camera triangulation**

DESCRIPTION OF THE SYSTEM

WheelPro system is a measurement tool that is able to obtain in realtime the profile of each wheel, providing immediate feedback of the wheel wear with an accuracy of ± 0.2 mm for every wheel of every axle of the train that is passing through the system. WheelPro system calculates all major wheel parameters including:

- Flange height and width
- qR factor
- Back-to-back wheel gauge
- Wheel diameter
- Rim Thickness
- Flangeback

WheelPro system can be installed indoors as well as outdoors, taking into account that no modifications to the existing line are required

MAIN CHARACTERISTICS

- Contactless measurement.
- Accuracy of ± 0.05 mm and an accuracy of ± 0.2 mm for the profile and ± 0.5 mm for the diameter.
- Available for indoor and outdoor installation.
- No civil work required.
- Adaptable to almost any kind of wheel/fleet/location.
- Robust against the presence of sanders, electromagnetic brakes, etc.
- Results are obtained in realtime, immediately after the train passes.
- Software tool included in order to manage measured data, analyze
- wheel wear, generate reports, trigger automatic warnings/alarms via SMS/e-mail, etc

1 MODULAR DESIGN

INSTALLATION WITHOUT CIVIL WORK

Independent modules that integrate machine vision cameras and line lasers, which are projected on the wheel in order to reconstruct its 3D profile. WheelPro system can be adapted to almost any kind of location, indoor as well as outdoor, and requires no civil works in the line

2 PROFILE MEASUREMENT

FROM TRAM TO HIGH SPEED

Design adaptable to any kind of fleet, including tram, metro, regional, freight and high speed. WheelPro can also measure in both directions of travelling and the results are robust against different parts of the train, such as sanders and electromagnetic brakes.

3 DIAMETER MEASUREMENT

TWO EXTRA MODULES

An innovative method has been implemented in order to measure wheel diameter with an accuracy from ± 0.5 mm. This new method allows to measure the diameter exactly at a previously defined point of tread and is robust against possible variations in the position of the wheel

4 SPEED MEASUREMENT

UP TO 120 KM/H

WheelPro system offers the possibility of measuring the speed of the train at the time the wheel profiles are obtained with an accuracy of 5%, and can be adapted to measure units travelling at a speed up to 120 Km/

5 REALTIME RESULTS

AUTOMATIC INCIDENCES NOTIFICATION

The results of the measured profiles are obtained in realtime and are available immediately after the train passes through the system. WheelPro can also be configured in order to broadcast via SMS and e-mail automatic messages when any wheel parameter is out of range