zentrak PROFILE VALIDATION SYSTEM

Train Profile Surveillance

Description

Slipped loads due to improper fastening or travelling vibrations of train vehicles are major issues in railway transport. Objects sticking out of a train's reference profile can cause serious injuries to persons and can lead to extensive damage to railway infrastructure.

The Profile Validation System (PVS) is designed to detect reference profile violations on passing train vehicles.

This precise and reliable surveillance system protects persons and railway infrastructure and avoids accidents with passing trains. Event based image recording allows the operator to verify the alarm and identify the severity of the profile violation.

PVS
Profile
Validation
System

System advantages

» Safety management of railway operation

» Human and asset protection

» Surveillance of train reference profile

» Alarm at violation of train reference profile

» Customer specific definition of reference profile

» No sensor installation near rail necessary

» Maintenance during normal train service, even at electrified tracks

» Object recognition for train speed up to 250km/h

» Event based image recording at day and night

OPTICAL SCANNERS

The supervised clearance gauge fulfills international standards like UIC 505-1 and can also be adapted to customer needs. The sensors are mounted on a gantry. No sensor installation near the rail is necessary. Objects protruding from the reference profile are automatically detected and allocated to their corresponding vehicles. The system provides high-resolution images of profile exceeding objects and alarms the operator to prevent humans from injuries and tunnels, bridges and other fixed assets from damage. The PVS uses laser sensors to validate a train's reference profile and reliably detects profile violations up to 250km/h. The wavelength of the laser sensors is outside humans' visual range and therefore does not disturb train service. The laser beams are harmless to human eyes due to their low energy output.

Technical Specification	
Train speed	5 to 250 km/h
Smallest objects detected	4cm at 160km/h, 6cm at 250km/h
Laser class	1, eye safe
IP class laser sensors	IP67
Environment	-25 to +50°C

Video

Train Talker

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ONE STEP AHEAD.