System for measuring the alignment of rails

- Measurement of the profile of the rail in a horizontal and vertical direction
- Storing of measurement data to the PC memory.
- Graphical presentation of measurement results on the PC
- Easy to handle and operate

The measurement system has been especially developed for use with tamping machines for measuring the alignment of rails in accordance with specific guidelines, but it is also used with coaches, cranes and lightweight trolleys to measure the vertical and horizontal position of the rails.

The system employs the PSM-200 laser position measurement device to access the position of the rail in the horizontal and vertical planes using a receiver connected to a part of the vehicle, which is in direct contact with the rail. The system can be installed to many types of machinery and does not require additional automation.

The system can be used during the rehabilitation operation or to measure the rail position in order to plan operations in advance or inspect the result of the work afterwards.
PSM-200 displacement measurement unit

The PSM-200 displacement and alignment measurement system measures the track alignment accurately over long distances. The units are weather proof and can be used in harsh environments, where high vibrations and shocks are present. With millimeter level accuracy the unit gives reliable results for the track maintenance work.

MEASUREMENT DEVICE
The PSM-200 measuring device has been developed especially for measuring the position of a working machine. It is based on a laser transmitter and an optoelectronic receiver connected to the object. The operator directs a safe, visible laser beam at the receiver and locks it in a steady position. The receiver recognizes the beam on the optical target and measures its position accurately.

The very good environmental durability of the equipment is achieved mainly by proper modulation of the laser beam and optics and the detection technology employed in the receiver, which will eliminate the influence of sunlight, temperature, fog, rain, snow etc. on the accuracy over a wide measurement range. The transmitter can be at a distance up to 350 meters from the receiver, depending on the environmental conditions.

INSTALLATIONS
Measurement is time based using PSM-software. System measures the alignment of the line rail at front bogie and gives the operator information about the position of the rail for the performing of control operations.

APPLICATIONS
- Measurement device for tamping machines and measurement coaches
- Measurement of crane rails
- Measurement of welded joints
- Measurement of rail profile

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