

Peace of mind with Demag crane runway surveys

The condition of a crane runway and the crane geometry have a decisive impact on the service life of a crane and its components Smooth travel motions can only be ensured by a perfectly aligned crane runway and crane geometry. They prevent premature wear of the travel wheels as well as sudden or abrupt changes in the travel speed and unexpected load sway.

#### **CRANE RUNWAY SURVEY WITH LMS**

We perform automatic, three-dimensional surveys of crane runways with our internationally patented Demag laser measuring system (LMS) – which takes each measurement multiple times, resulting in accuracy better than 0.5 mm. Smart sensors help to achieve this high survey accuracy.

#### PATENTED EXPERTISE FOR THE BEST RESULTS

- Latest diode laser generation, automatic selflevelling and correction in the horizontal plane
- Radio-controlled system controlled from a safe position
- Suitable for all rails: can be used for common rail types and suspended profile-section girders
  - even if they are badly worn and deformed
  - thanks to its adjustable guide system
- Continuous inclination monitoring of the measuring trolley
- Active derailment monitoring for the trolley
- Automatic 3D measurement
- Multiple measurement up to 30 measured values per point



## **EVERYTHING FROM A SINGLE SOURCE**

If required, we can use the results of the survey to give you a comparison of the actual situation with the theoretical design and develop a concept to eliminate any defects that are found.

We also check the exact alignment of the rails and can give you technical details, such as:

- Rail head wear
- Condition of the rail joints
- Rail fastening method and type

Initial evaluation of data on site immediately after the survey run

# Always the same survey method? Compare it for yourself.

LMS is the only laser-based measuring system for crane runways on the market that can also be used for suspension crane runways. The measured values are recorded direct at the point of measurement, allowing for any specifications of the relevant standards (1,000 mm required measuring distance). Any necessary corrections, such as the angle of the measuring trolley on the rail, are taken into consideration.

#### **ACCURACY**

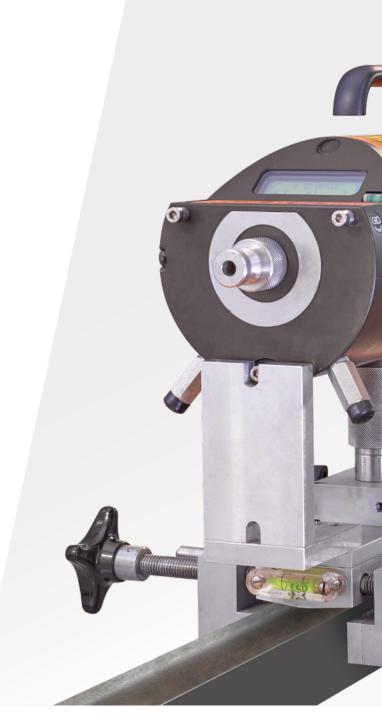
- Redundant measurements (up to 30 measurements per measuring point)
- Precise centring on the rail centre (± 0.5 mm) regardless of the rail type and degree of rail wear
- Measured values and checked direct on site
- Online monitoring of the survey and condition of the measuring trolley

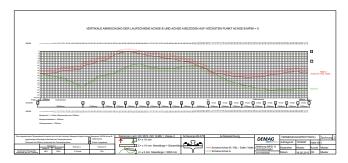
#### **SAFETY**

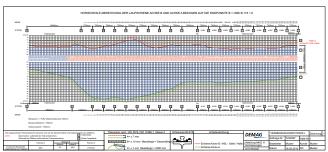
- Our personnel are trained regularly and satisfy the requirements of relevant safety standards.
- As required by relevant regulations, all measuring equipment used is checked, calibrated and certified by the manufacturer or an authorised service partner in accordance with ISO 17123-3 and ISO 17123-4 on the basis of the DIN EN ISO 9001 and DIN EN ISO 9000 quality management standards..

#### **RELIABLE RESULTS**

- Measured values are checked immediately after completion of the measurement
- Reliable results that can be used direct by specialist companies to implement appropriate measures
- Many years of experience in the evaluation and interpretation of resultsn









# Safety and efficiency – survey of crane and crab geometry

Your equipment is constantly exposed to enormous loads. Using state-of-the-art methods, the Demag survey specialists can help you to identify and eliminate weaknesses that go way beyond the normal wear of parts.



- Axis parallelism error of travel and trolley wheels
- Misalignment of guide rollers
- Deflection and deformation under load
- Special rail-mounted equipment (storage and retrieval machines, transfer cars, distribution carriages, hangar doors)
- Geometry of portal cranes, misalignment of carriage balancers, main beams, vertical alignment of fixed and articulated legs





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### WE CAN OFFER YOU EVEN MORE

- Survey of your crane/crab when it is supported on jacks and under no load
- Measurement of the travel wheels by turning them 360°
- Direct measurement on the travel wheel shaft alternatively on the outer surfaces of the travel wheels by using adaptable precision measuring equipment
- Additional search can be performed for gearbox, motor and bearing damage
- Comprehensive analysis of the crane geometry allowing for an optional survey of the crane runways
- Various standards can be referenced as required by the customer (ISO/ FEM/factory standard)
- For any type of crane (bridge crane, suspension crane, portal crane, S/R machine, STS crane)
- For all brands



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