



 HEGENSCHIEDT

WHEELSET DIAGNOSTIC SYSTEM ARGUS[®]S

APPLICATION AND USE

ARGUS[®]S is a stationary wheelset diagnostic system for rail vehicle wheels on the track. The system reliably measures the wear condition of the wheels even at speeds of up to 160 km/h in through-track operation. The vehicles are automatically identified as they pass through the measuring section and the wheels are measured simultaneously at several points using the light-section method. All relevant measurement data is archived in a database. This allows the operator to continuously monitor his wheelset fleet online and without loss of time.

The wear characteristics are determined based on the measured values and form the basis for an economical, environmentally friendly and safety-conscious maintenance.

The system is specially designed for installation and operation on heavily used routes and can also be used at low speeds. The system measures in both directions. The measuring system is integrated into the existing IT system or the HEGENSCHIEDT Total Wheelset Management system (TWM) via network coupling.

ADDED VALUE

- 24/7 fully automated wheel geometry monitoring
- Measuring operation at overrun speeds up to 160 km/h
- Archiving of all measurement data in a wheelset database with full online access
- High track availability due to short installation time, low maintenance requirements (annually) and replacement of the measurement technology during breaks in operation (patented offline calibration)
- No direct rail reference of the measurement technology when evaluating the profile of the light sections- A short, straight piece of track section is sufficient for installation
- No interference with the permanent way approval and large distance to the clearance gauge
- Low measurement uncertainty with up to 99% yield
- Measured variables based on DIN EN 15313:2016-09, and other standards
- Precise and online knowledge about the condition of all wheelsets with history and wear condition
- In conjunction with the HEGENSCHIEDT TWM, improved workshop organization and logistic preparation
- Proof of the extended measurement uncertainty under process conditions in accordance with VDI/VDE/ DQG 2618 sheet 27, VDA 5/ GUM by an accredited calibration laboratory





FUNCTION

- Detection of the tread contours of the running surfaces, the diameters of both wheel disks and the distance between the wheel backs during the pass
- Determination of wheel set geometric parameters such as flange height, flange thickness, wheel back to back distance, flange width and diameter from the recorded wheel profile
- Detection of the outside of the wheel including the last turning groove and tread rollover
- Network connection of the measuring system and integration into the existing IT or HEGENSCHIEDT TWM
- Design of the data interface as a web service and operation via an Internet browser

TECHNICAL SPECIFICATION

AREA OF APPLICATION		
Lengths	mm	approx. 6.000, without drive-in contacts
Track width	mm	1.135 ... 1.680, standard 1.435
Rail foot width	Size	Adjustable
Rail height	mm	140 ... 180 (e.g., S49 to UIC 60 E2)
Rail inclination		up to 1 to 20
Superstructure Ballasted		superstructure with approx. 600 mm sleeper spacing
Ambient temperature	°C	-20 ... +40
Power supply		3x400V 22.5kVA / TN-S
FEATURES		
Measured variables		Wheel flange height, wheel flange thickness, transverse dimension, track dimension, wheel back to back distance, diameter, hollow tread, tyre width, tread rollover, equivalent conicity
Measurement uncertainty (K=1) with restricted process conditions	mm	Profile dimensions e, h, H1: 0.2 Diameter d: 1.5 Wheel distance a1: 0.5
Passing speed	km/h	0 ... 80, design up to 160
Wheel diameter	mm	600 ... 1.250
Minimum distance between axles	mm	1.500
Maximum distance between axles	m	25
Maximum length of a train	m	1.000
Number of axles in a train	No.	1 ... 200
Minimum time between two movements	min	5
Yield (proportion of measurable wheels)	%	97 (under normal operating conditions)
Laser protection class		3B
Identification method		SOFIS and RFID according to AutoID in Rail GS1

