

# OSIRIS



**TWO TASKS,  
ONE IDEAL  
INSTRUMENT**

## **OSIRIS COLD / OSIRIS HOT**

Data sheet

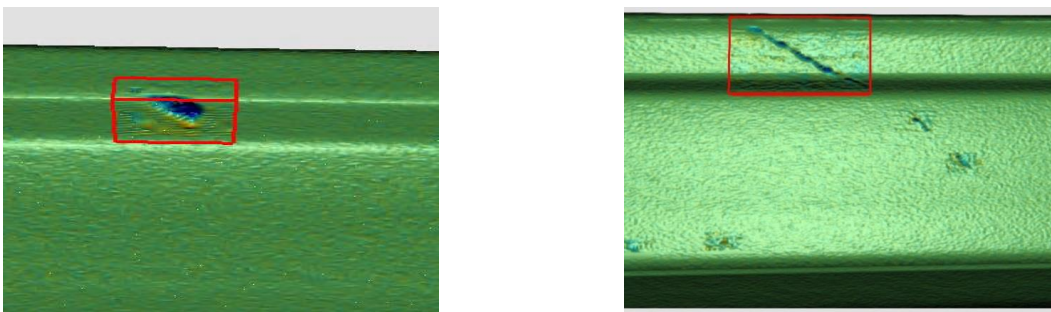
**NEXTSENSE**

**APPLICATION**

With OSIRIS, NEXTSENSE provides a stationary optical measuring system for continuously testing the surface finish and dimensional accuracy of rolled products. The great thing about this is that OSIRIS combines two applications in one system! The innovative measuring technology from NEXTSENSE registers almost any type of defect on the product surface, whilst also accurately measuring the profile of the rolled products.

**SURFACE INSPECTION:**

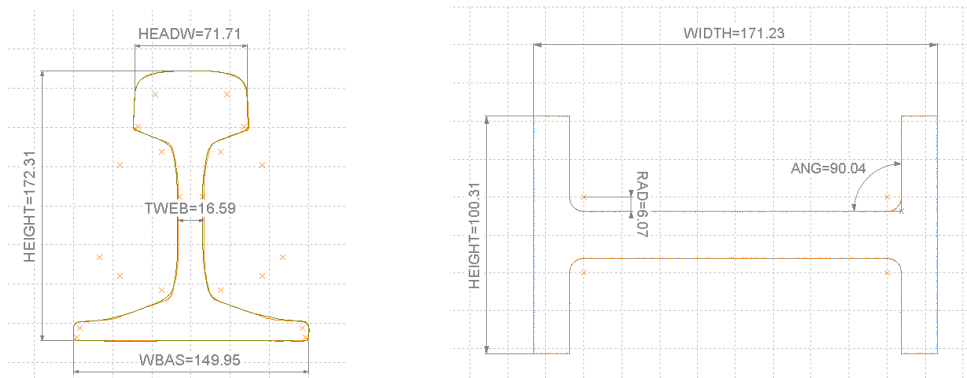
The aim of surface inspection is to automatically detect and classify surface defects (protuberances and depressions). Typical types of defects include peeling, blow-outs, scoring, rolling up or flaking.



EXAMPELS OF SURFACE DEFECTS

**PROFILE MEASUREMENT:**

As well as detecting surface defects, the system also rates the measured profile sections according to predefined evaluation specifications. Linear dimensions, such as width and height, various radii, angels between sides, the concavity of contact surfaces, and many other measurements can be taken. The following figure shows the dimensioning of profiles as an example.



EXAMPELS OF MEASURED VARIABLES FOR PROFILE MEASUREMENT

**PRODUCT VERSIONS**

The measurement system is available for hot (OSIRIS HOT) and cold (OSIRIS COLD) rolled products – depending on the stage of the rolling process where the system is to be applied. Additionally, the both versions come in two different dimensions (small and large), which differ in the size of the measuring field and therefore the maximum size of the measurement object. The smaller measuring field size allows greater accuracy during profile measurement and detection of smaller defects, whereas the larger measuring field size supports larger profiles and an extended freedom of product movement on the roller table.

|                   |                            | Application                   |                                |
|-------------------|----------------------------|-------------------------------|--------------------------------|
|                   |                            | Hot rolled profiles           | Cold rolled profiles           |
| Max. profile size | 400 x 300 mm<br>16 x 12 in | SUOS101/S<br>OSIRIS HOT Small | SUOS102/S<br>OSIRIS COLD Small |
|                   | 600 x 300 mm<br>24 x 12 in | SUOS101/L<br>OSIRIS HOT Large | SUOS102/L<br>OSIRIS COLD Large |

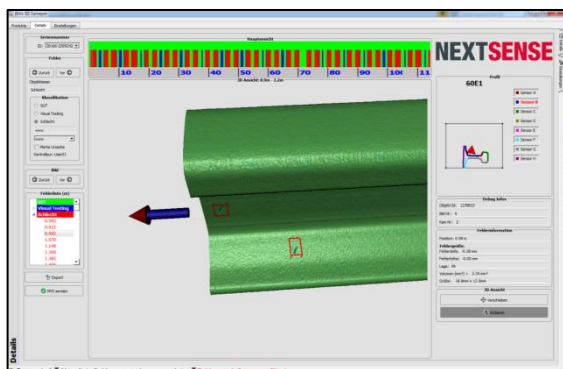
PRODUCT VERSIONS

**SCOPE OF DELIVERY**

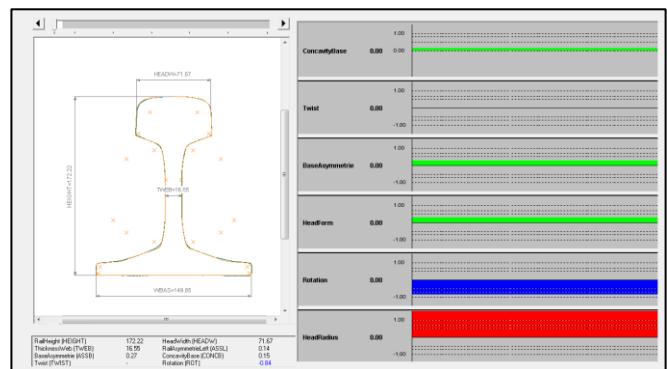
- ✓ System with 8 light section sensors
- ✓ Comprehensive computer system
- ✓ PLC cabinet for system automation
- ✓ Full services

**MEASUREMENT PROCESS**

When a profile passes the system, measurement is started automatically. Using state-of-the-art laser light section technology and high sampling rates, OSIRIS creates a complete 3D reconstruction of the product to be inspected during production in real time. The dimensional accuracy of the profile shape (e.g. width, height) is checked and the surface is examined for deviations by comparing the 3D data with your personal reference data. The measurement results can be reviewed and analyzed in real time on a control terminal.



SURFACE TESTING



PROFILE MEASUREMENT

A connection to your material tracking system guarantees correct assignment of the tested product and the corresponding serial number. The collected data is provided in a database for further analysis. Furthermore, the automatically created measurement reports – which are integrated in your material tracking system – maintain complete quality control.

In order to make the system more easily accessible for maintenance work in a protected area, the OSIRIS system can be removed from the production line.

**TECHNICAL DATA**

|  |  |
|--|--|
| Measuring housing (extendable) (WxHxL)           | approx. 2.3 x 2.3 x 0.8 m   90 x 90 x 31 in                          |
| System size with optional support structure      | approx. 7 x 1.5 x 4.5 m   275 x 59 x 177 in                          |
| Computer cabinet with air conditioning           | 800 x 1000 x 2400 mm   31.5 x 39x 94 in                              |
| PLC cabinet                                      | 600 x 400 x 2000 mm   24 x 16 x 79 in                                |
| Max. data storage (standard)                     | approx. 150 km (62 miles) production length                          |
| Object temperature                               | -15 to 1100 °C   -59 to 2012 °F                                      |
| Ambient temperature                              | > -10 °C   -15 °F  |
| Scan frequency                                   | up to 5 kHz  |
| Minimum product distance/evaluation time *       | > 5 s  |
| Defect depth/height (depends on surface quality) | > 0.3 mm   0.012 in  |
| Detection distance of profile measurement        | > 25 mm   0.98 in  |
| Maximum profile size (variant-specific)          | Small: 400 x 300 mm   16 x 12 in<br>Large: 600 x 300 mm   24 x 12 in |

\*) The minimum distance between two products (or the minimum required evaluation time) depends on the actual product length but always amounts to at least five seconds. For products of 100 m in length, for example, a distance of 15 seconds is required.

**Further information & offer:**  
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