

## Contamination Monitoring System

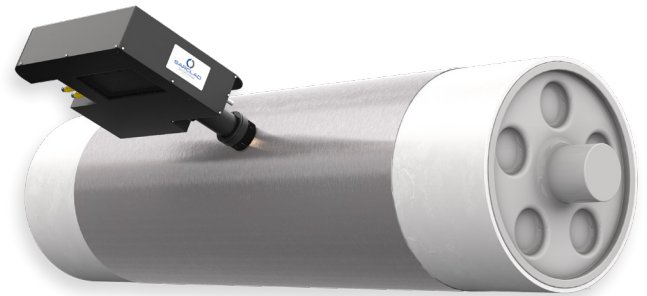
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# Contamination Monitoring System (CMS)

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The first continuous monitor of strip cleanliness providing real time data with unprecedented precision that distinguishes between oil and iron fines contamination.

The new Sarclad CMS is an innovative contamination monitoring system which utilises Laser Induced Breakdown Spectroscopy (LIBS). It provides strip producers and line manufacturers with a non-contact, online measure of very low levels of iron fines and carbon contamination on coils, after the cleaning section on the galvanising line.



## Unique capability to distinguish between oil and iron fine contamination

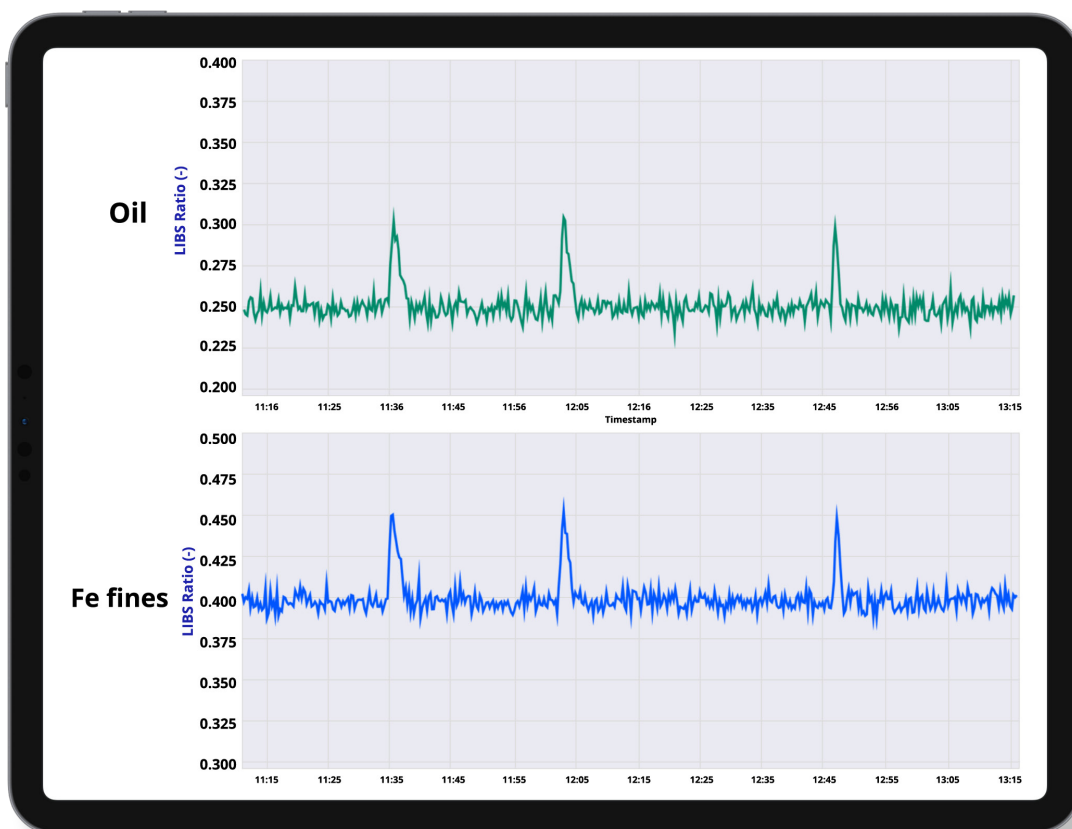
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The provision of real time quantitative data for every coil will ensure an effective and timely monitor of process drift, enabling correction before process issues arise. The recording of coil-to-coil variation will facilitate process improvement to reduce variability and improve product quality.

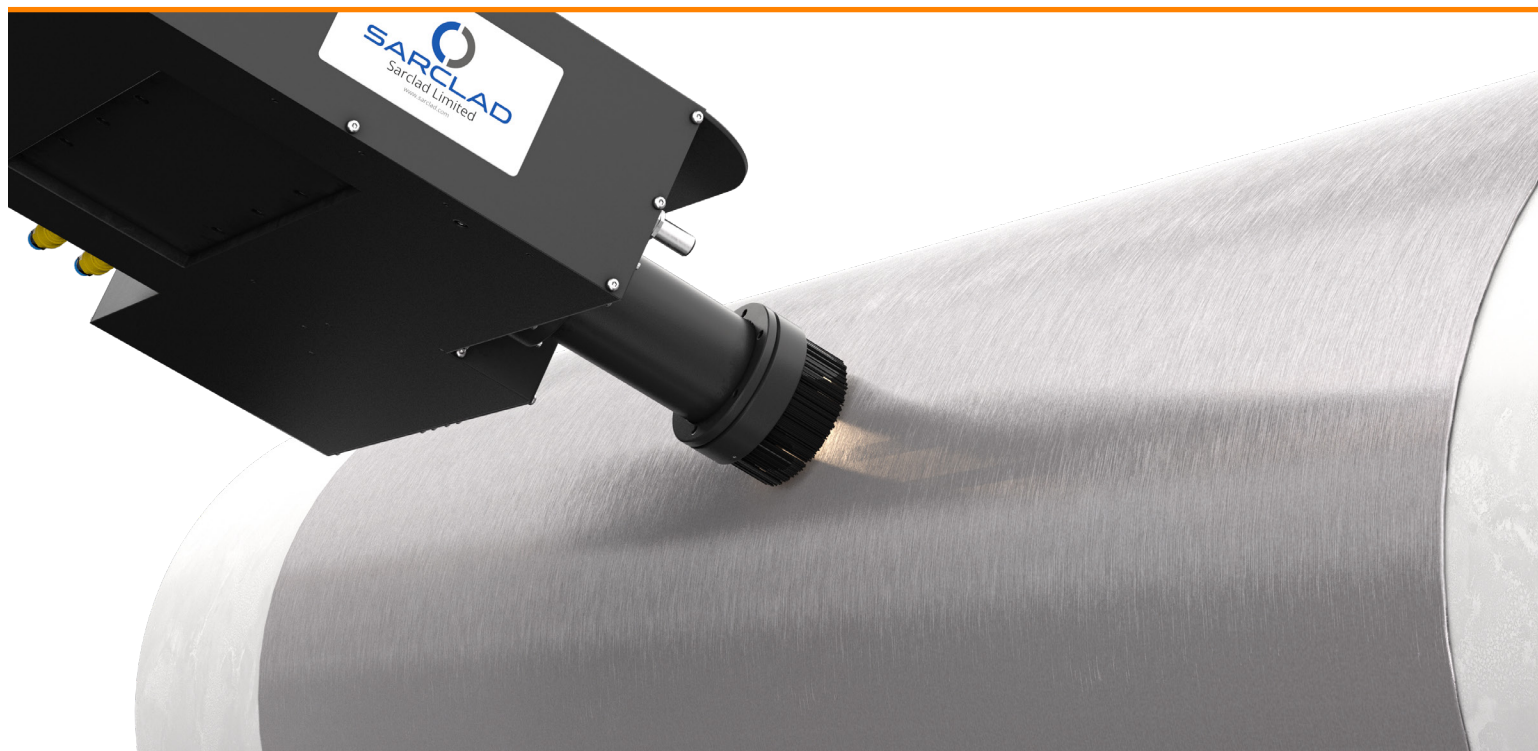
The unique ability to distinguish between oil and iron fines will allow steel strip galvanisers to target the core parameters of each component of the cleaning section to ensure the highest product quality and optimise overall process efficiency. The CMS is a highly sensitive and accurate measure of strip contamination, that will enable the industry to move on from purely indicative measures such as the scotch tape test.

| Contaminant | Measurable Range (mg/m <sup>2</sup> ) | Sensitivity (+/- mg/m <sup>2</sup> ) |
|-------------|---------------------------------------|--------------------------------------|
| Oil         | 0-120                                 | 1                                    |
| Iron Fines  | 0-200                                 | 2                                    |

Below is an example of the real-time results for oil and iron fine contamination levels generated by the CMS system.

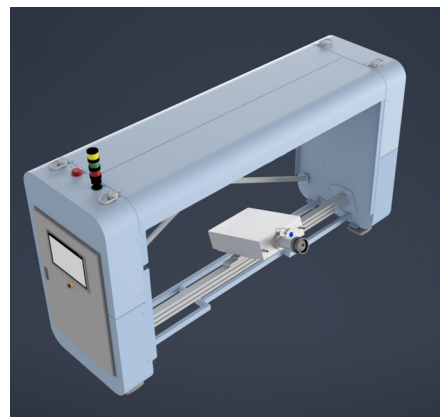
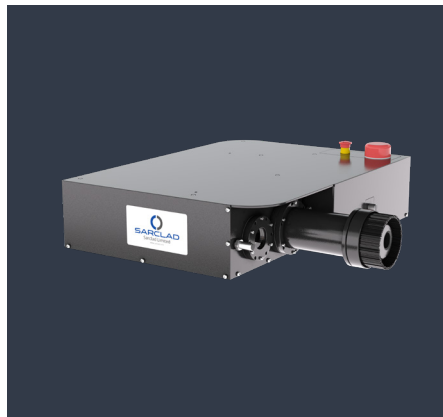


The CMS is situated on a roll at the end of the cleanin section of the coating line.



The system has been designed in a compact format to ensure that it can be fitted to any line, either new build or retrofit to existing lines. The sensor can be fitted to an automated and integrated traverse to allow measurement at various points across the width of the strip.

# OEM and Retrofit Offerings



Include the Sarclad CMS unit in the coating line scope of supply, to satisfy end user cleanliness measurement requirements.

Install the Sarclad CMS onto existing coating lines.



## Designed for Plant Manufacturers (OEM)

- Precision laser cleanliness measurement built into new lines.
- Includes Measuring head only (+ data analysis and display).



## Designed for Steel Manufacturers

- Retrofit to existing lines.
- Measuring head, positioning structure and integration.
- Data collection, analysis and display.



## Benefits

- Offer a system with a robust measurement of outgoing contamination readings from cleaning line section.
- Satisfy customer contamination control user acceptance criteria.
- Improved process control and quality assurance.
- Optimise cleaning to reduce costs.
- Increased line speeds.
- Reduce downgrades / rejections.
- Greater control and informed decision making.
- Improved environmental performance.

