



SDS V2

Advanced thermal imaging based slag detection system

LAND Slag Detection System (SDS V2) uses a high resolution thermal imaging camera to detect the transition between steel and slag. Designed to operate in harsh conditions, it uses a mid-wave infrared wavelength to reduce obscuration caused by smoke and fumes.

SDS is suitable for operators of secondary steel making vessels such as electric arc furnaces and basic oxygen furnaces, including those used for stainless steel. It can also be used in smelting operations for copper and platinum.

By using additional regions of interest (ROI) together with an additional thermal imaging camera, optional features such as stream position and freeboard height can also be integrated providing advanced process monitoring and control.

ImagePro V2-SDS is an integrated application within the ImagePro thermal imaging software package. As the tap commences, the software records a data log and produces a live graph for quality control. With the multicamera option, users can seamlessly integrate additional imagers into the system and software, enabling them to operate independently from the camera and continuous slag detection system.



FEATURES & BENEFITS

- **Up to 25% reduction in slag depths** compared to traditional methods of stream monitoring.
- **Fully automatic operation** allows alarms generated by the system to directly stop the tap before the slag is carried over.
- **Automatic stream identification and tracking** accurately identifies the stream and reduces background interference.
- **Powerful ImagePro V2-SDS** monitoring and control software includes a full range of functions from a single source.
- **Optional secondary imager** for stream position and freeboard level monitoring and control.

Slag Detection System (SDS V2) delivers improved yields, higher quality steel and reduces costly downstream processing costs.

See degrees differently.

SDS V2 SPECIFICATION SHEET
SPECIFICATIONS

SDS V2

MWIR-640-SDS CAMERA UNIT

Measurement Range:	500 to 1800 °C / 932 to 3272 °F
Pixel Resolution:	640 x 480 pixels
Pixel Size / Pitch:	17 µm
Spectral Response:	3.9 µm
Max Frame Rate:	HF: 60 Hz* / LF: 7.5 Hz
Optic (HFOV x VFOV):	12° x 9° / 25° x 19°
Focus Range:	0.75 m to infinity (12° FoV) 0.5 m to infinity (25° FoV)
Accuracy:	1% of reading
Noise:	0.5 °C RMS @ 500 °C, 12° FoV
Dimensions:	Approx. 450 mm/17.7 " x 373 mm/14.7 " x 215 mm/8.5 " (Full imager enclosure)
Power Rating:	12 to 24 V DC +/-10% 12 W / IEEE 802.3 at PoE+
Weight:	10 kg / 22 lb
Environmental Rating:	IP66 / NEMA 4
Compliance:	EMC (EN 61326-1)

SDS CAMERA SUPPLY

Connection:	Local connection interface between camera unit and image processing system
Services:	Water, instrument air, power input, located to the rear of the enclosure

THERMAL IMAGER POWER SUPPLY

Components & Connections:	Power supply, Ethernet communications (switch) Fibre optic data connection (option)
IP Rating:	IP65 / NEMA 4
Size:	380 x 380 x 211 mm / 15 x 15 x 8.3 in.
Weight:	15 kg / 33 lbs.

IMAGE PROCESSING UNIT

Slag/Steel Detection:	Alarm activation when a pre-set percentage of either slag or steel/metal detected within defined window
User Display:	Front page information display and location identifier. External data displayed via interface input.
Automatic Functions:	Tap detection, stream tracking, steel/slag ratio, thermal video and video file recording, log file of all data including tap number, clear display of steel/slag percentage (bars, numbers and graphs), alarm colours, etc.)
Software:	IMAGEPro V2-SDS - Advanced Image Processing and Application Software
Interfacing:	Open Data Interface, Modbus TCP/IP, Moxa I/O unit

* 60 Hz instruments are subject to different export restrictions in different authorities and countries around the world. All sales must be subject to export licence review.



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