

MONITORING AND DETECTION SYSTEMS

SWM-2 | OCR-R | CARE



PROVEN TECHNOLOGY

**EFFECTIVE QUALITY
SUPERVISION**

ONLINE MONITORING

**FAST RETURN ON
INVESTMENT**

**FOR NEW AND
OLDER MACHINE
GENERATIONS**



Soudronic

Technology that keeps you ahead

CARE

CAN REJECTION

Economical detection device with self-synchronization to detect and eject the first and/or last can of each production series as well as the last and/or first can after double blank ejection.

Ejection of test canbodies is possible during production in order to investigate the quality and the overlap. This is an important feature mainly in high-speed lines and large series production.

CARE is a minimum solution for quality supervision.

Customer Benefits:

- Fewer reject cans in the downline
- Contributes to quality control and elimination of time consuming downline interruptions

OCR-R

OVER-CURRENT REDUCTION SYSTEM

System for over-current reduction for wire and machine protection including reject can control. In addition to the functions of CARE, OCR-R guarantees an economical and effective detection of contamination of the body blank within the welding station. The weld current of the machine decreases immediately and is reset after a few milliseconds. The risk of a wire break is minimized to almost zero. The canbody with partial weld seam is ejected and production continues without interruption.

Customer Benefits:

- Minimal risk of wire breaks and damage to welding rollers
- Less down-time
- Increase of production efficiency
- Fewer reject cans in the downline



Welding defect due to overlacquering detected by OCR-R.

SWM-2

WELD MONITOR

In addition to all OCR-R functions SWM-2 provides integral assessment of the weld seam quality. It is equipped with a user-friendly graphical touch-screen operating panel. Set-up is made by recording reference measurements over a series from 3 to 10 canbodies. Information of each ejected canbody is displayed on the monitor screen. Data of the last 12 canbodies, faulty or good quality, are registered and can be recalled at any time. The SWM-2 monitor is equipped with the energy measuring channel as a standard. Optionally it can be equipped with the heat channel to cope with highest detection requirements.

Customer Benefits:

- Highest reliability
- Effective quality supervision of weld seam
- Online monitoring
- Fast return on investment due to time, material and money saving
- Meeting highest quality demands

THE ENERGY CHANNEL

The weld seam is monitored based on the weld energy. The energy supply to each individual weld spot is measured and continuously evaluated. In case of weld parameter fluctuation, the set-up of reference measurements can be repeated during production.

Working Principle:

The energy value of each weld nugget is calculated by sampling the voltage drop between the weld rollers and the welding current.

Compared with the OCR-R functions, it also detects faulty seams, body offsets and variations of the overlap.

THE HEAT CHANNEL

The heat channel allows to detect variations in the overlap of canbodies taking the heat signal as a reference. Based on an Infra Red Sensor (IR) the heat radiation of the weld seam is evaluated.

Working Principle:

The heat radiated from the weld seam is sampled 2000 times per second. The sampling rate is independent from the weld current frequency and the weld current wave form. The advantage of the heat channel is that smallest defects are detected.

SEAM PROTECTION FROM THE BEGINNING TO THE END



Cutting defect at trailing end detected by SWM-2.



Contamination caused by tin splash detected by SWM-2.



Overlacquering about 3 mm before trailing end detected by SWM-2.

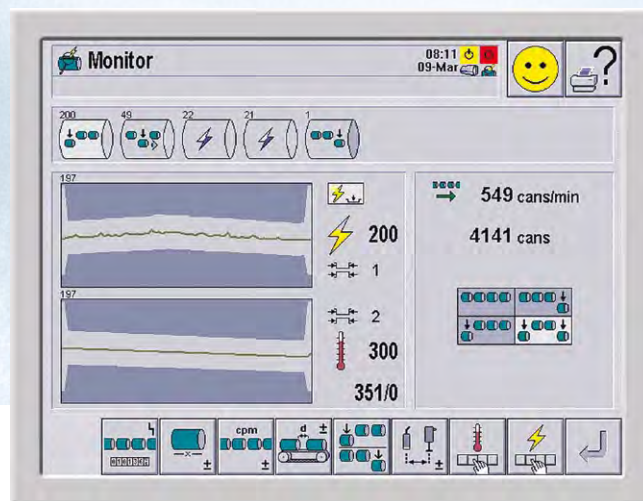


Material defect detected by SWM-2.

ACCESSORIES

SWM-2 / OCR-R

All monitor types are available with UNICONTROL (new welder generation) or as stand-alone version and retrofit set (older welders).



Monitor System SWM-2

QUALITY CONTROL FUNCTIONS

TYPE	SWM-2	SWM-2	OCR-R
	ENERGY CHANNEL	HEAT CHANNEL	
Defect within seam area	> 2.5 mm	> 1.5 mm	no
Defect beginning/end (folded corners)	> 2.5 mm	> 1.5 mm	no
Body offset	> 2.0 mm	> 1.5 mm	no
Overlap check	> 0.3 mm	> 0.15 mm	no
Seam contamination (overlacquering)	> 1.0 mm	> 1.5 mm	> 3.0 mm
Min. weld speed without oxide-free seam	–	≥ 20 m / min	–
Min. weld speed with oxide-free seam	–	≥ 25 m / min	–
Wire protection	yes	no	yes
Ejects first and/or last can	yes	yes	yes
Single can production monitor	yes	yes	yes