CONTROL THE DRESSING OF GRINDING WHEELS AUTOMATICALLY.

ELIMINATE EXCESS GRINDING.
EXTEND WHEEL LIFE.
PREVENT CRASHES.

ExactDress™ Wheel Dress process Control Card

Improve dressing efficiency and extend wheel life.

SBS ExactDress™ reduces dressing time and increases wheel life for both profiled and standard grinding wheels. ExactDress uses SBS AEMS proprietary acoustic sensor technology to monitor the high frequency signals generated on the grinding machine structure during the dressing process. It compares the current AE process signal of a wheel dress to a stored Reference waveform of a known good dress to determine and report when the dressing process has been successfully completed, maximizing the efficiency of the dressing process.

Setup couldn't be easier. Simply dress a wheel to teach the system the AE Reference waveform of a successful dressing process. The system maps the entire duration of the process and breaks it into time slices or "zones," indicated by a bar graph on screen. During operation, the system displays which (if any) of the zones in the dressing process are not complete, and informs the CNC control when the entire dress process has completed successfully.

ExactDress also includes gap and crash control. Initial contact between the wheel and the dressing tool can be detected so the machine control can stop wheel in-feed without operator intervention, reducing cycle time. It can also detect and report an abnormal contact within milliseconds, allowing the in-feed to be stopped, avoiding a crash, damage or injury.

ExactDress monitoring permits the operator or CNC control to (1) determine if the wheel is being dressed fully across its width, (2) control the aggressiveness of the process, and (3) maintain the quality of the dressed wheel while conserving process time and wheel material.
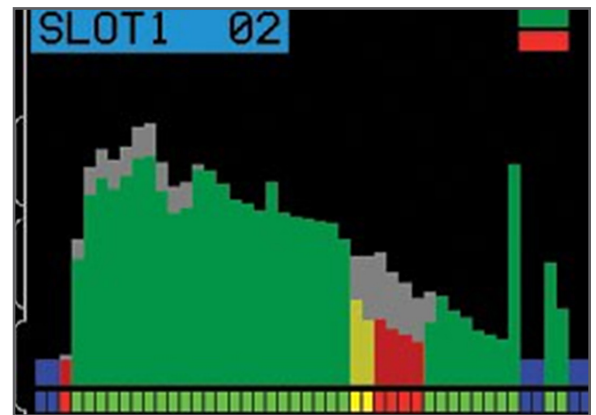
DC or AC Power Options:

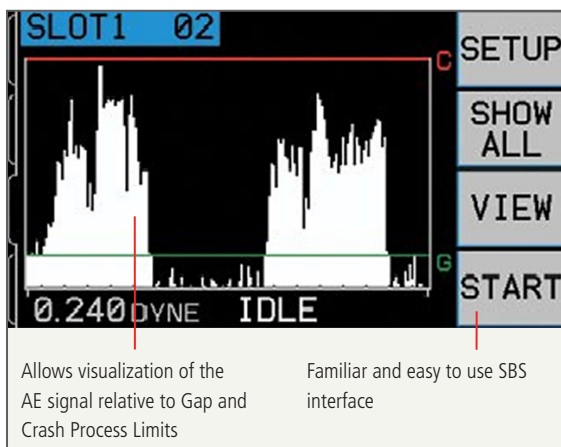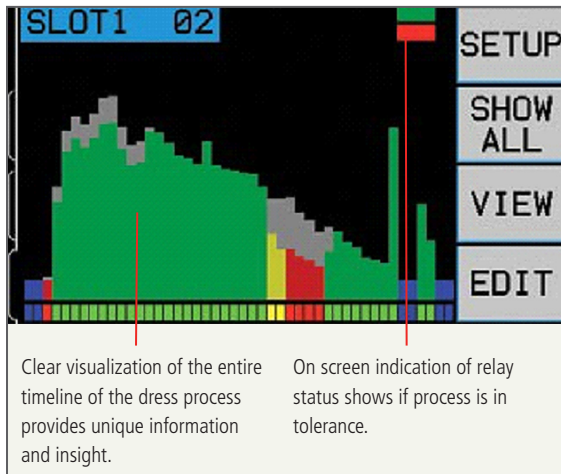|	
Green	Zones exceeding the Zone Minimum limit are complete.
Yellow	Borderline zones nearing Out of Tolerance.
Gray	Learned Reference waveform shown in background.
Red	Zones below the Zone Minimum limit are incomplete or defective.
Blue	Indicates zones which are below the Ignore Level.

BENEFITS:

- Cut cycle time and increase productivity
- Eliminate excess dressing
- Automate dressing in-feed to prevent crashes and damage
- Improve wheel surface quality with precise monitoring
- Extend life of dressers and spindle bearings

FEATURES:

- Enhances features of the AEMS
- Easy to set up and operate
- Backed by world-class, worldwide SBS customer service

ACCRETECH   **SBS** DYNAMIC BALANCE SYSTEM

DETAILS

Clear visualization of the entire timeline of the dress process provides unique information and insight.

On screen indication of relay status shows if process is in tolerance.

Allows visualization of the AE signal relative to Gap and Crash Process Limits

Familiar and easy to use SBS interface

Measurement Parameters for Dressing Control

Zone Minimum:

This parameter specifies what percentage of the Reference Waveform must occur as a minimum at each zone of the process. During the teach process, the system divides the cycle automatically into zones. Each zone corresponds to a time slice of the entire process. During monitoring each zone of the current Process Signal is compared with the corresponding value of the Reference Waveform. If the zone minimum value percentage of the Reference is not achieved for any zone, the machine performs another dressing pass.

Maximum Minimum:

The parameter provides an adjustable upper signal level limit for the process, which serves as an indication that too much dressing contact has occured. If it is exceeded, the dress in-feed may need to be adjusted to reduce the aggressiveness of the process.

Ignore Level:

This parameter establishes a baseline signal level for all process zones. Any zone in the reference waveform that has a signal valve below the Ignore Level will be automatically excluded from analysis. This allows for suppression of normal signal noise during process analysis.

Zone Edit:

The EDIT menu can be used to edit the saved Reference Waveform to turn off evaluation of the Process Minimum status for any zone(s) within the process. This can allow any zones that represent a portion of the process that does not require process control to be ignored in the determination of process status. This can have benefits where a portion of the process does not produce consistent AE signal levels and where this portion of the process is outside the area of concern for monitoring.

Available Outputs to CNC

Gap Detect: Indicates the AE signal level has risen above background levels, showing that wheel contact has been initiated.

Crash Detect: Indicates a wheel crash event has occurred within 2ms of the signal detection.

Process Minimum: Indicates if all zones of the current process have met the minimum signal level threshold for complete dressing.

Process Maximum: Indicates if the Process signal of any zone has risen above the maximum threshold set.

For more information on SBS products, see AccretechSBS.com to find your local SBS distributor or Representative, or call Accretech SBS, Inc.

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