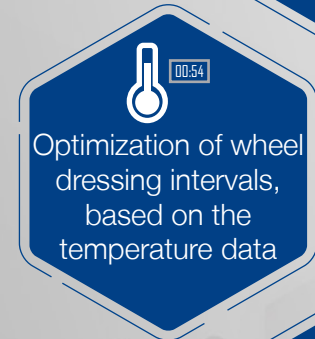
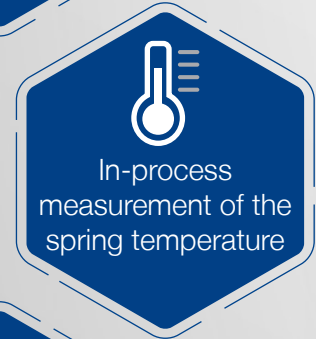
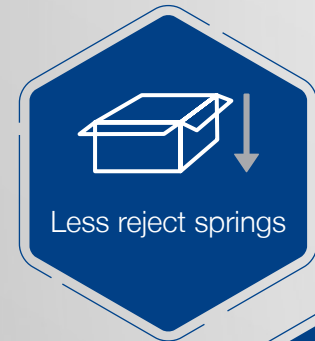


Improving the Quality and Performance of the Spring End Grinding Process by means of a Temperature-Controlled Grinding Technique

 **IQ temperature**

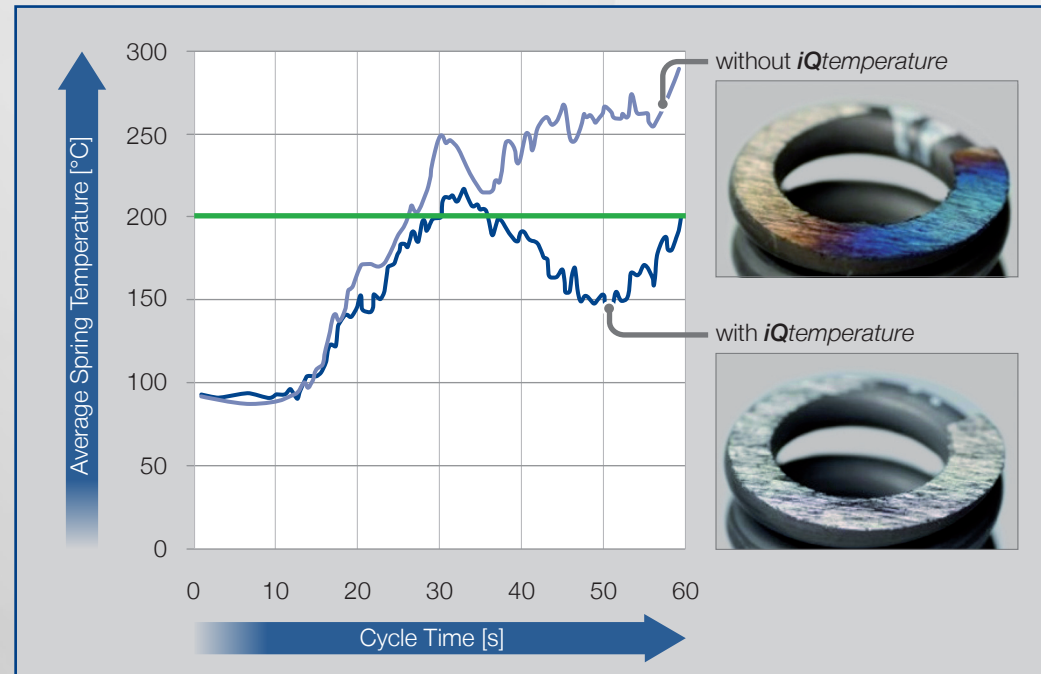
for
spring end grinding machines



Situation

- During the spring end grinding process there is a critical spring temperature which must not be exceeded
- Currently, spring producers find out whether the upper temperature limit has been exceeded or not, by means of the springs' annealing colours
- This occurs only after the spring end grinding process has been completed
- The temperature cannot be regulated in order to avoid reject springs

Solution



- The *iQtemperature* function enables a temperature-guided grinding of spring ends
- The average temperature of springs is recorded by a patent-pending, in-process, temperature measurement system
- The down-feed speed during the spring end grinding process is regulated depending on an adjustable maximum temperature
- Thus the critical spring temperature is never exceeded
- Based on the collected temperature data, conclusions can be made about the optimal wheel dressing point
- Thus downtimes can be reduced even more while the output rate is increased

Requirements

- Preliminary verification of function by means of a spring drawing
- Minimum wire diameter: 5 mm