Krautkramer Testing Machines

Flash trimming monitoring on ERW-pipes

Monitoring the flash trimming on longitudinal weld seams of ERW-pipes

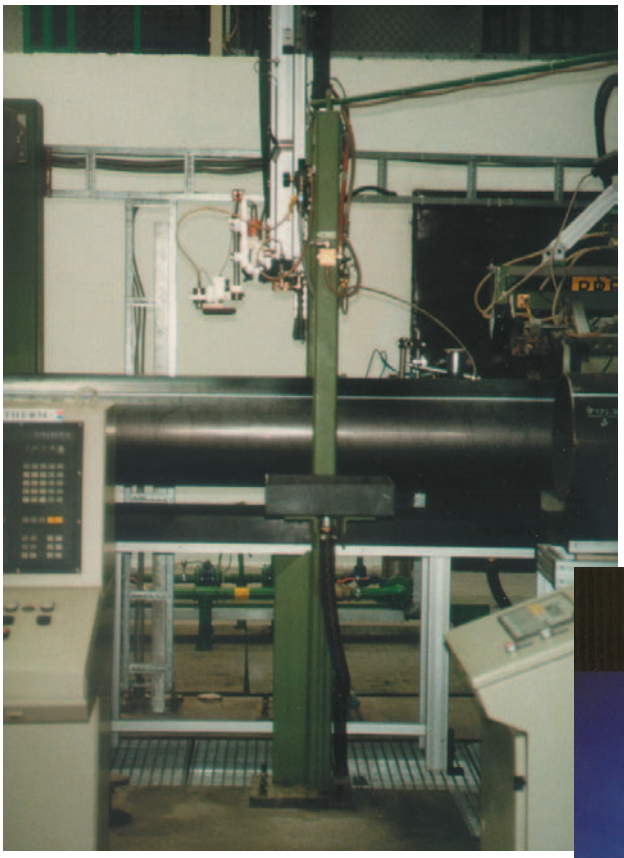
For a user of welding lines for the production of ERW-pipes it is important to see whether the trimming tool, responsible for removal of the inside flash, is working correctly. Using the testing machine which we developed, this monitoring is made directly after welding and not after the tubes have been cut. Therefore this testing machine is primarily a system for monitoring and control of the production process.

For flash trimming monitoring: OSK

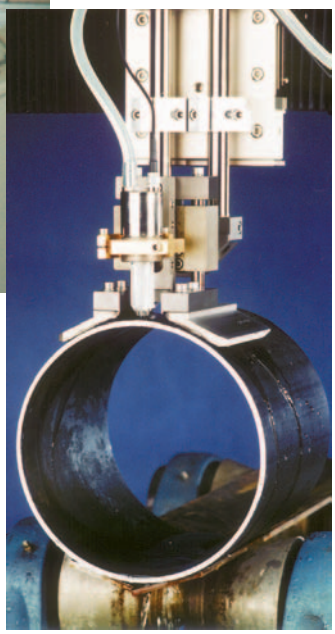
The system operates with an oscillating immersion probe which measures the wall thickness in the area of the weld.

As an alternative a phased array system can be used. The advantage of the flash trimming monitoring with phased array is that there is no mechanical movement. Probe switching is done electronically via a time delay.

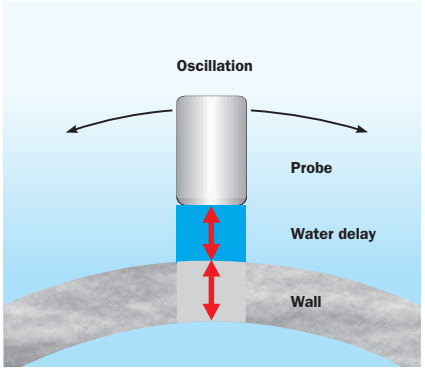
The result is displayed on a monitor as a topographical presentation of the inside tube surface. Irregularities are immediately recognized thus enabling direct process control.



Flash trimming monitoring in the production line



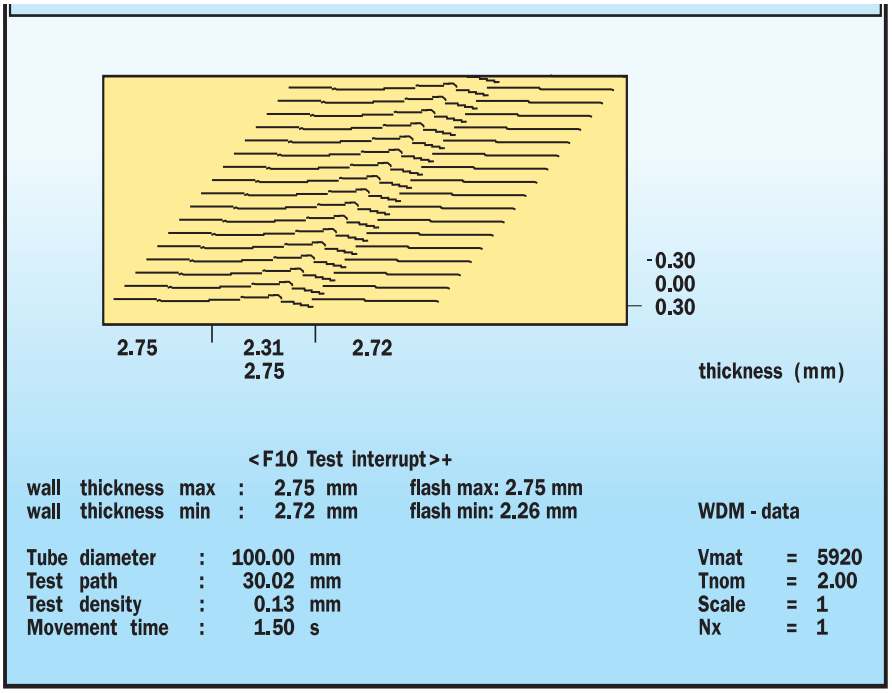
Test mechanism lowered



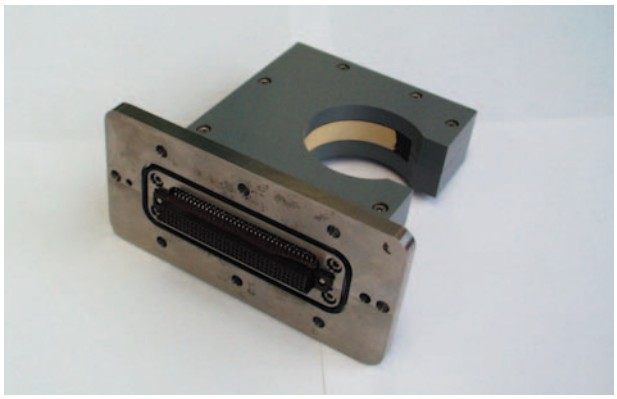
GE imagination at work

The following conditions must be fulfilled: the surface temperature at the test location must not be more than 80°C. It must also be guaranteed that the tube is perfectly round. This means that deviation on the circular tangent in the sound entry point shall never exceed 2°.

In addition to flash trimming monitoring there is also another application with this machine: determination of tube volume can be simultaneously made via the wall thickness measurement. If the diameter is known then the corresponding tube length can be determined. In this way you can reduce the material losses to a minimum.



Presentation of results



Phased array probe

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