

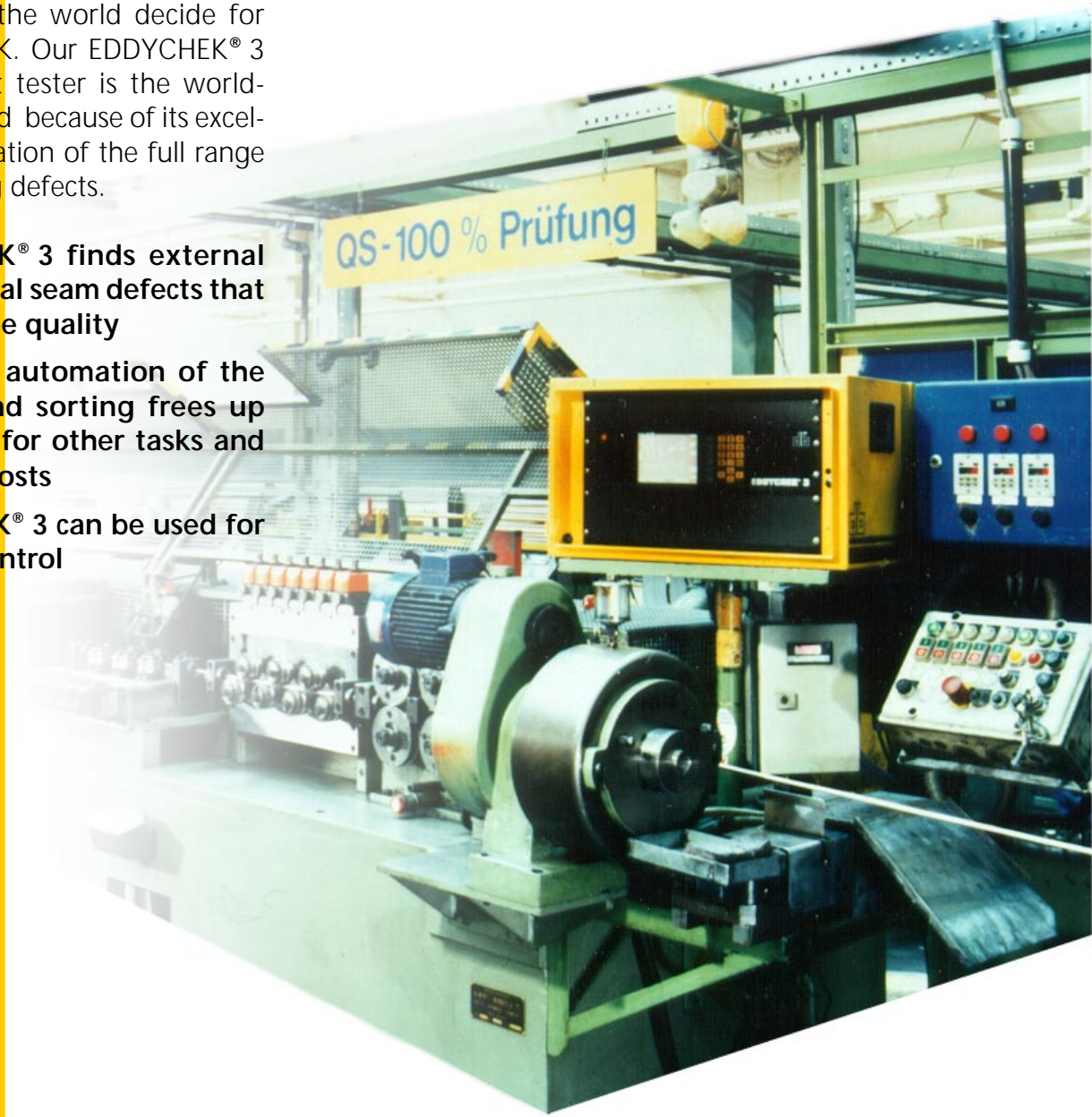
# Double-wall brazed tubing

**Can you find critical processing defects?**

**Is quality assurance too time-consuming?**

When confronted by these problems, experienced manufacturers throughout the world decide for PRÜFTECHNIK. Our EDDYCHEK® 3 eddy current tester is the world-wide standard because of its excellent identification of the full range of processing defects.

- EDDYCHEK® 3 finds external and internal seam defects that impair tube quality
- Complete automation of the testing and sorting frees up operators for other tasks and saves on costs
- EDDYCHEK® 3 can be used for process control



## Double-wall brazed tube testing

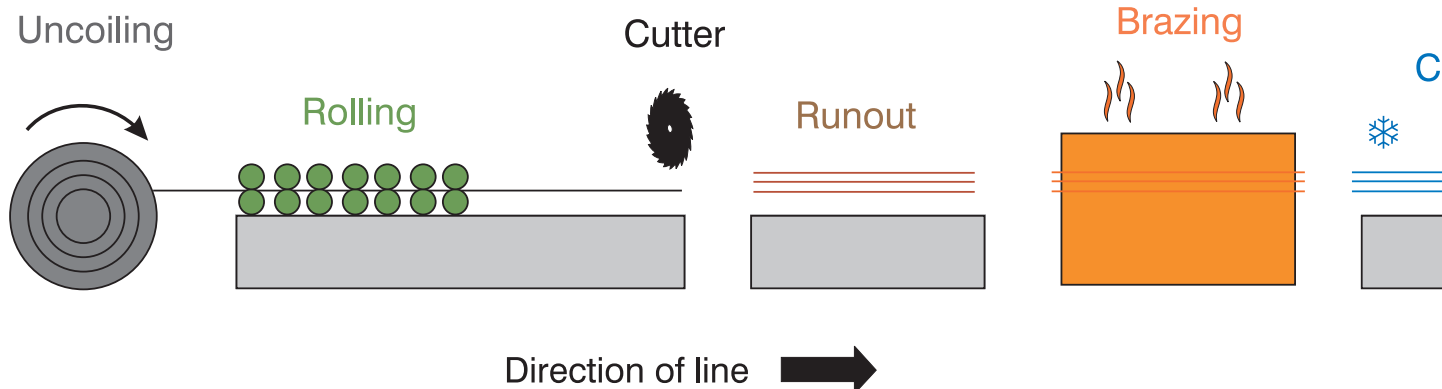
Basically, a continuous strip of copper-plated steel is rolled through 720° and brazed to provide a burr-free, bead-free tube.

The brazed tubes/coils are then tested offline/inline using PRÜFTECHNIK's **EDDYCHEK® 3** or **EDDYCHEK® 4** eddy current tester at a speed of approx. 1 - 4m/s. The test coil is positioned after the straightening rollers to ensure the least vibration possible. Magnetization is required as the tubes are ferritic and saturation causes them to react uniformly. The 'critical' defects detected during testing are crimped to mark their positions for later identification even after coating.

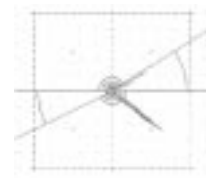
The test results provide a continuous quality and process control as the operator can see any deterioration in the process and react immediately.

Finally, samples of the ends of the tubes are taken for destructive mechanical testing using crushing and flaring.

## Production process (conventional)



## PRÜFTECHNIK's digital defect analysis o

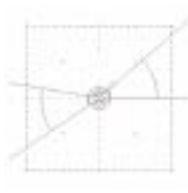


**Defects in the external seam** can be critical and can lead to a reduction of the **burst rating of the tube**.

**Defects in the internal seam** can lead to leakage after flaring connections and are not leakproof.

... Can your eddy current tester identify the

## of typical processing defects



away from the  
do not necessarily  
leaky tubes but can  
defects on the flanges  
ng so that tube con-  
are no longer

**Copperspots or copper runs**  
are not critical tube defects.  
However, despite the copper  
spots being subsequently  
dressed by a drawing die, an  
irregular surface can cause  
problems in the coating pro-  
cess.

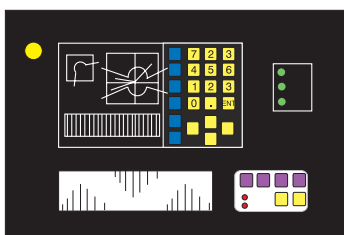
Defects in the internal seam  
can also lead to a weakening  
of the tube.

**All the world's major  
double-wall tube  
manufacturers have  
chosen the  
EDDYCHEK® 3 as their  
standard tester**

## current m too?

**EDDYCHEK® 4 will be  
used for future process  
control with additional  
functions to monitor  
the rolling machine,  
swimmer control and  
brazing parameters, etc.**

EDDYCHEK® 3



Probe in  
magnetization  
unit

Cooling

Horizontal  
straightening

Vertical  
straightening

Crimping

Sorting



Good Qty. A Qty. B Scrap

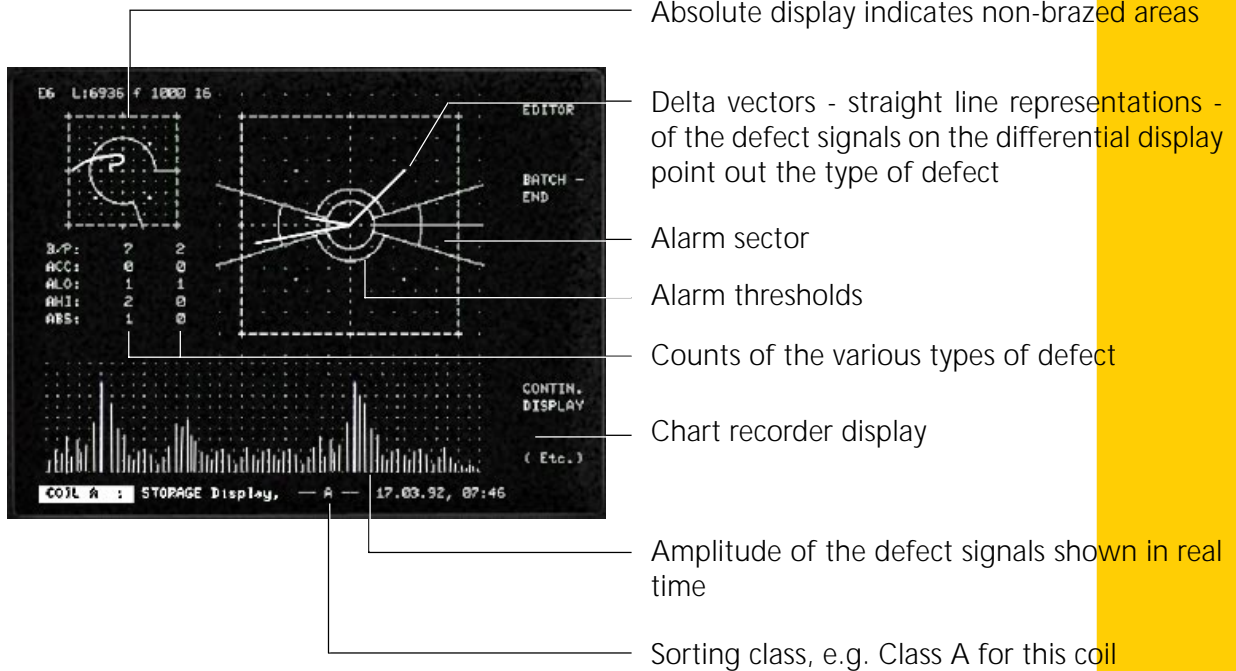
# EDDYCHEK® 3 eddy current tester



## Features

- 100% automatic testing
- Detects and marks all relevant defects
- **Amplitude** and **phase** evaluation using alarm thresholds and sectors
- Delta vector (straight line) signal display
- Visual and/or acoustic warnings
- Integrated documentation
- Data archiving
- Auto-separation of defective material
- Optional PC interface for remote control

## Screen display



## For reliable results in quality control

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