



## INDUSTRIAL MACHINERY

### Quick-connect coupler

Conventional couplers are typically machined and welded to the tube. This new quick-connect coupler is produced directly from the tube ends. By exploiting the formability of austenitic stainless steel, this technology achieves material savings of up to 30%. Fabrication time is decreased by one third, while energy input is reduced by up to 80%.

A circular bead on an inner tube accommodates the O-ring. Corresponding beads on the outer and the tube take-up a special stainless-steel spiral, which acts as a fastener. The coupler produces a joint. The joint has proved its water-tightness at pressure up to 100 bar. This well exceeds the nominal pressure of 40 bar.

The maximum deflection of the tube axes is 0.5 degrees. The useful inner diameter of the tube is constricted within the coupler.

The coupler is designed for use both underground and in water.

**LOCATION/ENVIRONMENT** GERMANY/OUTDOOR

**PRODUCT** STAINLESS STEEL TUBE AND SPRINGS

**FABRICATION PROCESS** DEEP DRAWING PROCESS

**GRADE** 304

**SURFACE**

**COMPETING MATERIAL** NOT POSSIBLE IN OTHER MATERIALS

**DATE OF COMPLETION** 2005

**MANUFACTURING COMPANY** BECKERT BRUNNENTECHNIK GMBH

**MATERIAL SUPPLIER**

**SOURCE OF INFORMATION** EURO INOX, STAHL-INFORMATIONEN-ZENTRUM

**REMARKS** THE COUPLER RECEIVED A SPECIAL PRIZE FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN THE 2006 GERMAN STEEL INNOVATIONS AWARD.

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