

Strip Centring on welding machines and strip joiners

Application:

In the entry area of continuous strip processing lines the tail end and the head end of two strips are joined together, this is carried out using welding or strip joining machines, depending on the material and gauge of the strip and on the line design.

Modern welding or strip joining machines include systems for fully automatic centring upstream and downstream of the welding or strip joining machine. Mechanical centring devices are mainly used but there is a high risk of damaging the strip edge.

Functional principle:

The illustration below shows the space-saving EMG solution for the alignment of the passed strip end to the new strip head. It is very successfully used - especially for retrofitting.

The strip width for the passed strip and for the new strip is measured with the optical sensor system BREIMO [1] in front of the welding or stitching machine. In addition, the position of the head of the new strip is determined with the edge position sensor EVK [2.1] and additionally the angular position of the new strip is determined by taking into account the BREIMO values.

The centring of the passed strip in relation to the strip axis and angular position of the new strip is then carried out via a centring frame [5], which picks up and centres the strip with one or, in the case of thicker strips, with two clamping bars. The position and angular position of the passed strip is measured using two further EVKs [2.2] and [2.3].

The system can also be designed for bringing the strip head of the new strip in line with the strip tail end of the passed strip.

