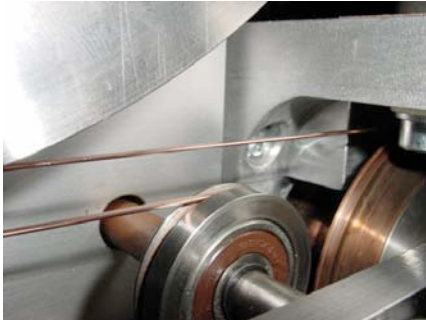
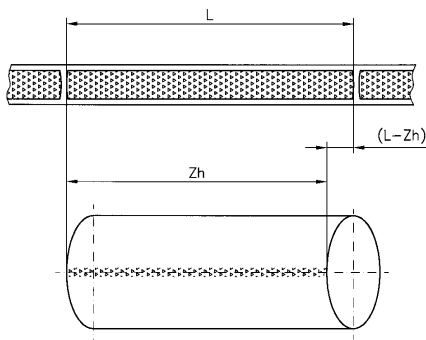


008 What is the "wire elongation", and how much should it be?



Usually a canbody welding machine uses a single copper wire passing the inner and the outer welding roll.



The wire is under mechanical stress, heated by the hot sheet edges or heated by the current passing through its cross section (in longitudinal as well as in vertical direction!). This leads to an elongation of the wire. Logically should a wire elongation be as small as possible. On a correctly adjusted Can Man welder the wire elongation is less than 2%!

$$\frac{L - Zh}{Zh} = 1 - 3 \%$$

L = Length of the tin
(impression after 2nd run)
Zh = Body height

Example

L = 153 mm
Zh = 150 mm

$$\frac{153 - 150}{150} = 2\%$$

Weak wire
tension



NOTE:

Although a weak wire tension produces a lower wire expansion, it can also lead to the “adhesion” of the wire to the ends of the can. One phenomenon is that poorly (“cold”) welded seams are the starting point or can even lead to wire breakage.



Great wire
tension



NOTE:

An excessive wire tension (great wire expansion) leads to “distorted” weld spots, which are caused by the wire speeds that differ between the upper and lower welding roller.