



INTERNATIONAL  
**Syalons**

## ADVANCED CERAMIC SOLUTIONS

### Ceramic Weld Rolls

International Syalons manufacture a range of silicon nitride based sialon advanced ceramic welding rolls for use in high frequency (HF) and electric resistance welding (ERW).

As a tube producer you will be familiar with the common problems associated with the HF welding application. Our high quality precision ceramic weld rolls can remove many of these troublesome problems, resulting in reduced downtime, higher quality product from the mill and reduced costs!

#### Reduced Material Pick-up

International Syalons precision weld rolls eliminate material pick up problems that are commonplace with high frequency welded tubes. This is particularly prevalent with non-ferrous materials where surface condition is critical. Stainless, Brass and Aluminium tube manufacturers can achieve substantially improved surface finishes with no risks of rolling weld spatter or particles into the tube surface. Some producers have even changed to ceramic rolls through the complete forming section of the mill!

#### Improved Weld Roll Life

International Syalons weld rolls typically achieve 10 to 12 times more life than tool steel rolls; in some instances this has been as high as 20 times.

#### Reduce HF Heating

Practical tests have shown that ceramic weld rolls can reduce HF weld power by as much as 30%. This actually also reduces unwanted 'field' heating of local components such as shafts, stands, lubrication points etc. Ceramic rolls also offer huge benefits for small diameter tubing manufacturers where upgrading to ceramic weld rolls can reduce weld vee length. This ensures more efficient positioning of induction coil and impeder, which can reduce the H.A.Z. (heat affected zone) and produce a more aesthetically pleasing product.



#### Vast Experience

For nearly 40 years International Syalons has been developing high quality engineering and process solutions for Industry. Our current range for the tube industry includes weld and forming rolls, seam guides, tube expanders and calibration drawing dies. These products are made from our Syalon 101 grade, which has excellent wear properties and is resistant to attack by many molten metals. With excellent thermal shock resistance, they are used in many RF heating applications where the material is in contact with hot metal parts.

#### Technical Support

The successful integration of ceramics into industrial and engineering systems requires close collaboration between you, the end-user, and us, the material suppliers. Our Technical Specialists are available to discuss your requirements in detail and assist in exploiting the significant advantages which Syalon 101 has to offer.



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