

## **The more complex the better.**

By John Swain, Anopol Ltd

A recent photography session at our premises in Birmingham inspired me to put pen to paper again. For over 40 years I have been extolling the main attributes of electropolishing stainless steels. Improved corrosion resistance was top of the list, followed by a decoratively pleasing appearance and anti-stick characteristics. The photograph featured here brought me to the realisation that electropolishing had a further attribute. It is a known fact that the only practical way of achieving a bright clean finish on stainless steel wire components, such as automobile trim, was by electropolishing. Because electropolishing is in effect reverse electroplating, similar parameters apply to both surface treatments. For example, the rating of the rectifier and size of processing tank will determine the surface area that can be treated at any one time. However, the chemicals or electrolytes employed bear no relation to one another.

So what is the attribute about electropolishing I have tended to overlook in the past? In a word: complexity. Stainless steel components with extreme complex shapes can be electropolished far more economically than by mechanical hand polishing. Tubular items have proved to be particularly suitable, as witnessed by the thousands of motorcycle exhausts electropolished each year. Intricate machined components, as also castings can be successfully treated to give all the advantageous characteristics of an electropolished surface.

In simple terms, where electropolishing can be successfully employed, there is money to be saved and functional advantages to be gained. This is particularly valid for components with complex shapes.

