

A close-up photograph of a wire finishing machine. The image shows several large, curved metal rollers with a fine, woven mesh texture. A thin, bright metal wire is being fed through the rollers. The lighting is dramatic, with a strong red glow from below, highlighting the metallic surfaces and the texture of the rollers. The background is dark, making the rollers and the wire stand out.

White paper

Micro gun patented technology for
multi-line highly efficient wire finishing



Vapormatt

Highly efficient, patented micro gun wire cleaning technology

The cleanliness of a continuous product is critical for ensuring smooth and reliable production at downstream drawing, welding, annealing or coating operations.

Today manufacturers opt for technologies such as acid etching or pickling, using expensive and increasing difficulty to handle chemicals. Alternatively, they might opt for brushing or ultrasonic technologies that are generally cheaper but not as effective.

Increasingly, companies are looking to the wet blast process as it offers an environmentally friendly technology that can provide some of the highest levels of cleanliness available.

However, for smaller diameter wire products running at faster speeds, the wet blast process has now been optimised to reduce operating costs by up to 85% making it comparable to other mechanical treatments while maintaining the high standards of finish expected of a wet blasted surface.

Having patented a multi-strand micro gun technology, Vapormatt can now offer wire manufacturers a highly efficient wet blasting process for small diameter, high speed products.

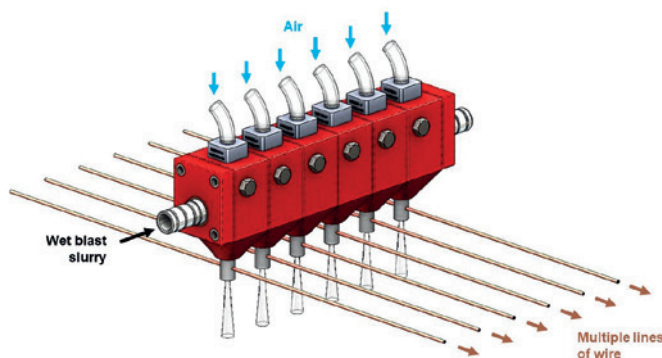
By passing individual strands directly through a narrower blast stream, movement of the wire is reduced in the blast and ensures total coverage around the whole surface of the wire being treated.

In the diagram below, each gun is aimed at one wire. The wire is held in the blast stream by passing it through a hole drilled across the diameter of the nozzle exit.

This arrangement is particularly efficient as very little blast power is directed anywhere other than at the wire itself – it therefore achieves the required surface finish using the least amount of power.

Another benefit is that micro guns are easily configured in a manifold that uses a common slurry feed, allowing the processing of multiple lines of wire in the most efficient way possible for maximum productivity.

Multiple micro guns for multiple wire production lines



Vapormatt automatic Profelis machine fitted with micro guns For wire and cable finishing



Profelis



Vapormatt, Robins Drive, Bridgwater, TA6 4DL, UK

t +44 (0) 1823 257976 e sales@vapormatt.com