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Well-Screen Wire Lines

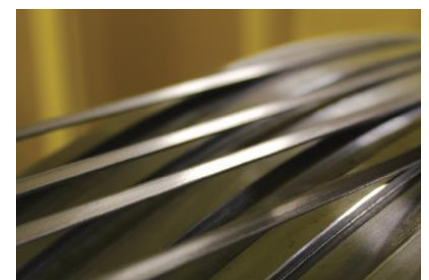
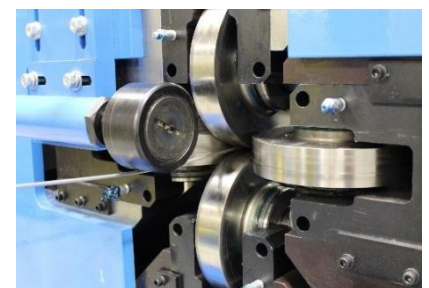
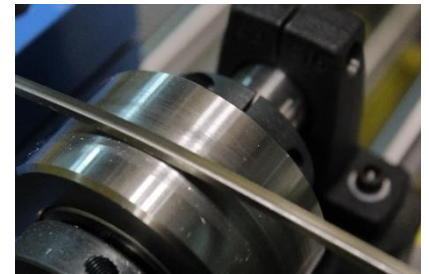
FENN is proud to have hundreds of installations across the globe including many successful well screen wire lines

The importance of a proper well screen cannot be overemphasized when considering the efficiency of the filtration process. Well Screen wire is widely used throughout the world for the filtration of water, oil, and gas wells, and is the dominant screen type used in the water well industry.

Well screens are made by winding rolled wire (typically stainless steel), triangular in cross section, around a circular array of longitudinal rods. The wire is attached to the rods by welding. With proven success across several installed lines, let FENN help your company become a leader in the production of well-screen wire with a line designed to suit your requirements.

“FENN’s Engineers and metallurgy experts worked closely with our team in all aspects of the project- from examining and understanding our material specifications to machine design, trial run at their works prior to shipment, and finally startup, commissioning and training of our operators at our factory in India”

*Prakash Shah
Bilfinger Technology*



Machine Specifications

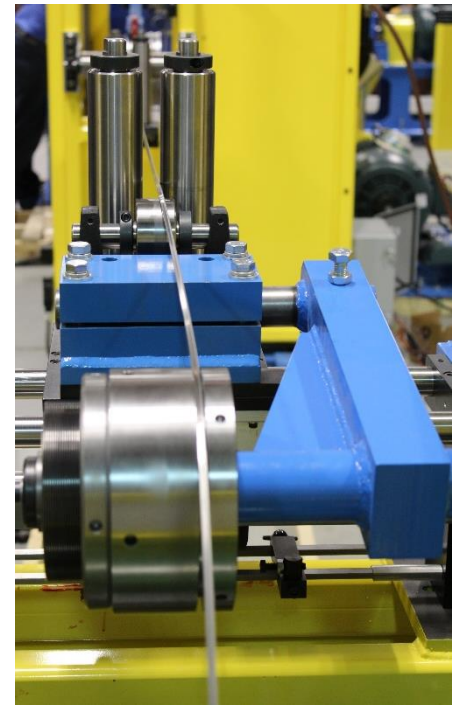
Typical Materials	304 and 430 Stainless Steel
Typical Section Size:	3 x 2 mm to 7.5 x 3.5mm
Typical Tolerances:	Height +/- 0.02 mm Width +/- 0.01 mm * May vary over section range
Typical Max Tensile Strength of Entry Round:	700MPa
Typical Entry Round Range:	2-8mm Diameter

Main Features

- Two plane quick opening wire straightener
- Rugged and Precise Wire Flattening Mill (manual or power screw down available)
- Tungsten Carbide Shell Mill Rolls for increased roll life
- Multi-sheave dancer for wire tension speed control
- Precision non-driven Turks Head with profile rolls for precise wire shaping
- Double drum driven capstan for pulling material through Turks Head
- Recirculating coolant system for Rolling Mill and Turks Head
- Traversing Wire Guide Spool Take-up Various Capabilities Available
- A.C. Vector Variable Speed Driver Control System, with tough HMI for set-up, running and diagnostic operation of the line. Remote access available

Optional Features

- Various types of pay-off equipment
- Laser gauges for round wire and finish profile
- Continuous measurement with data collection options available.



The Final Product



Screen filters consist of closely packed parallel filter well screen wires which are welded onto carrier wires beneath them. In most cases the filter wires have a triangular cross section.

The triangular geometry of the well screen wires has the advantage that the actual filter gap is very short which reduces the likelihood of filter blockage.

The Anatomy of FENN's Well Screen Wire Lines

Below is an example of a FENN Wire Shaping line, engineered to form round wire into to a triangular cross section for well screen applications.

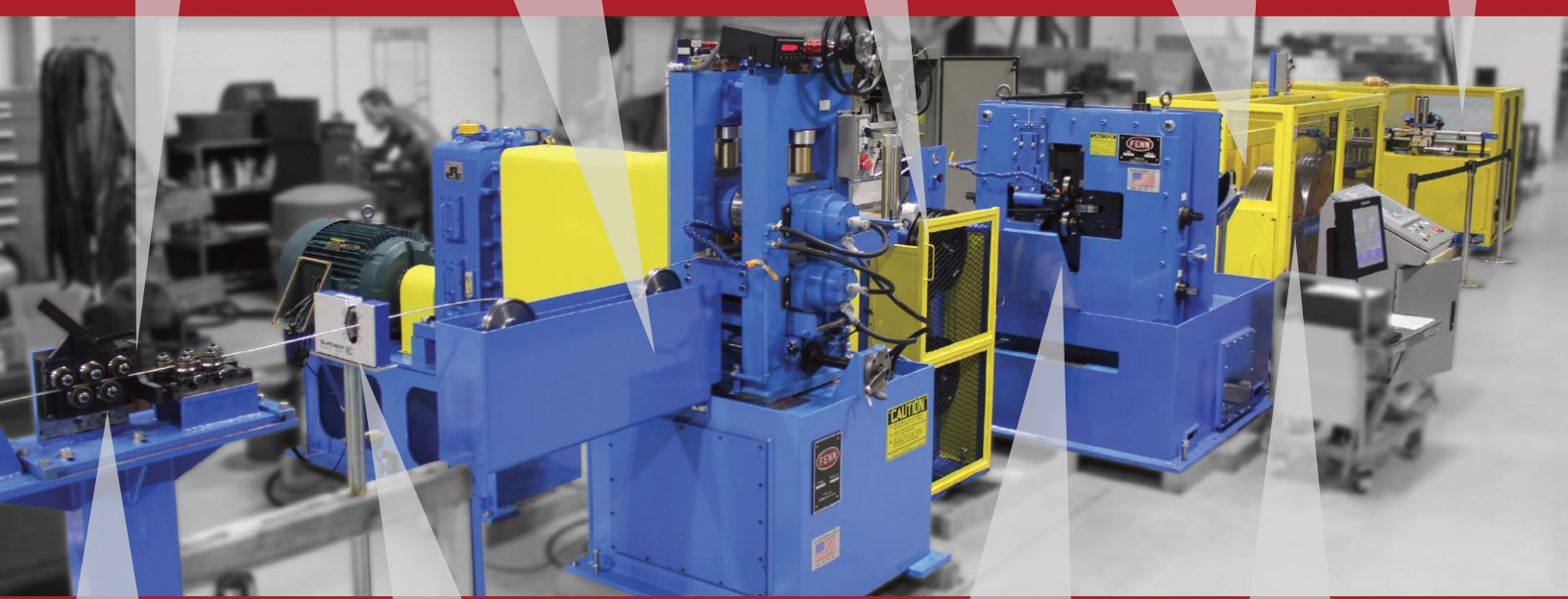
B) Wire guide & straightener

D) Wire passes through rolling mill, flattening wire as first step in shaping process (see figure 2)

E) Speed and Tension Control Dancer

G) Zumbach laser width and thickness gauge measuring the accuracy of the finished shape.

I) Traversing take-up



A) .125" wire (figure 1) is paid off to wire flattening and shaping line (not visible in this photo).

C) Zumbach laser width and thickness gauge for checking round wire accuracy

F) Wire passes through turks head, effectively shaping wire on four sides to create a wedge shape. Exit wire dimensions are .118 inches by .193 inches (see figure 3 and figure 4)

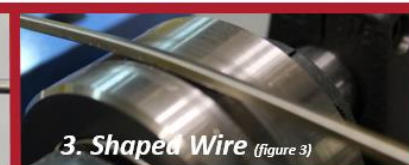
H) Capstan serves to pull wire through the turks head. After passing through the capstan, wire is collected in traversing take-up (**I**).



1. Round Wire (figure 1)



2. Flattened Wire (figure 2)



3. Shaped Wire (figure 3)



4. Shaped Wire (figure 4)

To learn more about how FENN can customize a Wire Shaping Line for your Well Screen application, Contact us today!