

FROM 8 MM ROD TO 2 MM ANNEALED WIRE

THE ASTONISHING IN LINE SELF-ANNEALING METHOD FOR ETP COPPER WIRE

An energy saving policy is a must for every industry because of two reasons: energy is expensive and potentially harmful to the environment.

A new method that saves about half of the energy previously required is the latest idea of Giulio Properzi and his engineering team.

This method has been named Self-Annealing Microrolling[®] (SAM) and replaces the conventional break down drawing machines having in-line annealers.

The Microrolling[®] Mill, a machine that is in operation at dozens of different users worldwide for ferrous and non-ferrous wires, has been slightly modified to achieve, in the end, wire at a temperature high enough to obtain good annealed characteristics after quenching.

For this special application it is a Monobloc with 8 rolling stands, each one having the typical Properzi 3-roll configuration, and only one motor.

The machine is completed by an emulsion mister, an exit chamber with controlled atmosphere and a super compact quenching pipe.

While in a Drawing Machine the wire must remain at low temperature, a rolling mill can work at high temperature.

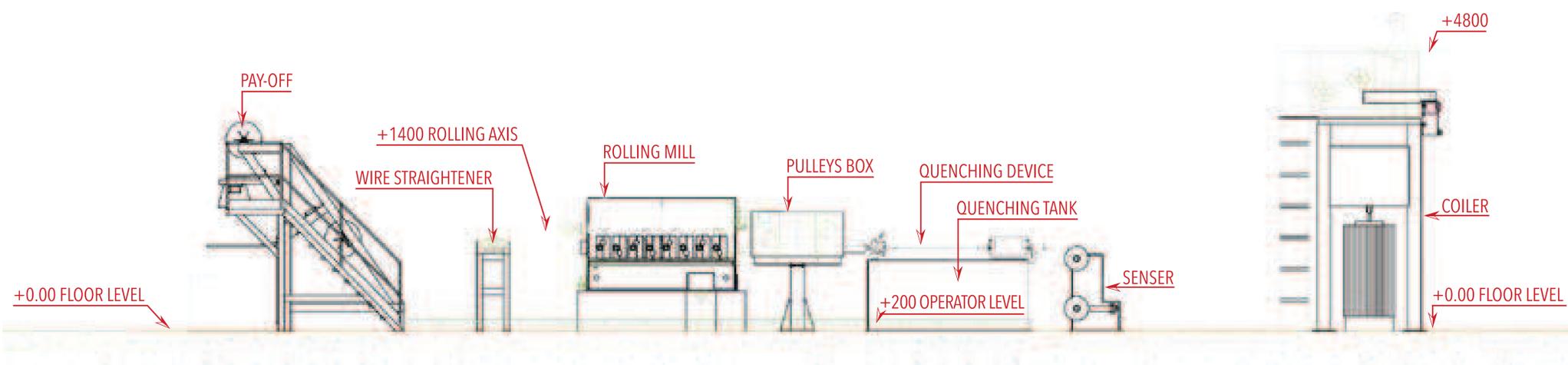
The rolling power – as theory teaches – is totally transformed in heating energy and a part of it can increase the temperature of the wire during the rolling process to levels above the annealing temperature.

This is the brilliant reasoning behind our patented idea that will probably change every drawing shop.

Here are the achieved advantages:

- **No annealer required, no maintenance**
 - **Zero energy for annealing**
 - **Compact lay-out**
 - **Up to 100 kWh/t saved***
- **Less than € 100.000 per year in energy cost**

*Not only is the annealing energy saved but also the deformation power required is less because the copper is rolled at an elevated temperature.



OUR PRICE FOR A COMPLETE SAM LINE IS COMPARABLE TO THAT OF THE PRIOR-ART.

Roundness of the 2 mm (1.8 mm) wire fully matches the requirements of the subsequent multiwire drawing operation.

One SAM line is currently in operation at Anglia Metal in the U.K. It is very compact and operates at a 27 m/sec production rate producing 2 mm wire and will produce 1.8 mm wire in the near future.

FURTHER MORE

No threading - No injuries
No time lost

No annealer cabling
Easier erection

No dedicated transformer



Copper Rod \varnothing 8 mm



...the Properzi Microrolling[®] Mill...



...the Self-annealed wire...