

PRODUCTS

equipment, supplies and more

Micromill design process can use heat generated from used energy to anneal wire

Italy's Continuous Properzi Spa, represented in the U.S. by Properzi International, reports that its patented Self-Annealing Microrolling® (SAM) method makes use of the Properzi Microrolling technology to replace the conventional drawing/annealing processes while providing tremendous energy savings.



Per the company, the SAM model is a sophisticated machine that consumes only 80-90 kWh/t while obtaining the desired elongation of the wire, usually around 30%, for the subsequent drawing process in multi-wire machines. While a wire in a drawing machine must remain at low temperature, in a rolling mill it can be processed at higher temperatures. The rolling power is totally transformed into heating energy, and some of that can be used to 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.

There are many advantages to this approach: no threading, no injuries, no time lost, no annealer cabling, easier erection and no need for a dedicated transformer. There also are options that enable the roundness of a 2 mm (1.8 mm) wire to fully match the requirements of the subsequent multiwire drawing operation.

The first SAM line, equipped with eight rolling stands, is currently in operation at Anglia Metal in the U.K. It is very compact and produces 2 mm wire at 27 m/se, but it can also be configured to produce 1.8 mm wire. While utilizing only six rolling stands, the SAM can produce 2.6 mm wire at the exceptional production rate of 5 tph.

Thanks to its characteristics, the Properzi Microrolling Process is not only ideal for breakdown of nonferrous wire

(Cu, Zn or Al), it can resolve many of the problems associated with hot, warm or cold processing of their alloys. This advantage is made very clear when confronted with particularly difficult to draw materials such as copper-phosphorus, copper-zinc, mechanical alloys of aluminum, composite or clad materials, tantalum, titanium or other "exotic" materials and alloys. See p. 74 for more.

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Non-twist coiler, the 'Pail Packer,' can ably serve for multiple wire processes

Italy's MFL Group, represented in the U.S. by MFL USA Service Corp.—announced that its latest advance for wire drawing technology is the "Pail Packer," a non-twist coiler machine, known as the PPM.

Per the company, the Pail Packer offers a no-twist take-up solution suitable for a diverse range of wire types, including high/medium/low carbon, CO2, FCW, stainless steel and aluminum wires. It enables smooth wire payoff into various processes without introducing twists in the wire. While initially designed for welding wire, this machine has evolved into a versatile solution for multiple applications, making it an ideal substitute for conventional gooseneck coilers.

The Pail Packer offers the following key advantages over traditional gooseneck coilers. *High coil capacity:* with the ability to handle coil weights up to two tons, it reduces the need for operator intervention. *Increased production speed:* the PPM boosts productivity with higher production speeds. *Minimal maintenance:* designed for efficiency, it requires less maintenance, reducing downtime and costs. *Effortless setup:* setting up the PPM is straightforward, saving time during installation and changeovers. *Wide wire diameter range:* it accommodates a broad range of wire diameters for versatility.

The PPM's benefits also extend to subsequent processes. *Static payoff:* high-speed, energy-saving operations are enabled. *No snarls:* wire handling is smooth, preventing production interruptions. *Enhanced efficiency:* its higher coil weight capacity contributes to overall process efficiency. The PPM, which can be used in heat-treating multi-wire lines, can manufacture products such as welding wire, bedding springs, galvanizing lines, nails and more.

SECTOR UPDATE

Wire rod equipment

CONTINUUS PROPERZI ITALY/USA



Continuus-Propenzi SPA offers SAM rod breakdown technology.

What do you offer?

There are two paths to the greener future that everyone desires. One is a shift from fossil-fuel sources of electricity to solar, hydro, and even nuclear power. The other, and best, way is to consistently lower the amount of energy needed for any necessary process. Recently, Giulio Properzi has focused on the specific process of breaking down copper rod, and has developed a new method of drastically reducing consumption of electric energy. This idea has materialized into the Self Annealing Micro (SAM) system that is now available for industrial applications. See p. 62 for details.

What should readers know about your company?

1. *Expertise.* Italy's Continuus-Propenzi, a pure engineering company, uses its specialized know-how to tailor make systems that meet customer requirements.
2. *Forward-thinking.* Founded in 1947 by Ilario Properzi (1897-1976), the company—through its renown IULIUS 4.0 package of automation and information technology—today helps customers take advantage of Industry 4.0 through features for new plants as well as upgrading options for existing ones. Both can help managers obtain the best possible results.
3. *Global industry presence.* Currently, 30% of the CCR copper lines and over 95% of the aluminum lines worldwide, excluding China, are from Continuus-Propenzi Company.

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MFL GROUP ITALY/USA



MFL Group's FTS45-AF50 rod breakdown machine and annealer.

What do you offer?

MFL Group is a leading global company providing a complete machinery range for wire, cable and rope manufacturers. Under the Frigeco brand, we offer a comprehensive range of rod breakdown equipment that ensure high production speeds, top-tier wire quality, and energy efficiency. See p. 49 and 62. The Frigeco brand further established the MFL Group as a leader in the wire and cable sector. Other brands integrated into the business's portfolio include CM Caballé, OM Lesmo and Eurodraw Energy, which have enriched its wire and cable division with know-how and decades of experience and extremely valuable intellectual property. In 2022, we further expanded by acquiring Cosco, enhancing our support for wire and cable manufacturers with electrolytic coating and tinning lines.

What should readers know about your company?

1. *One-stop partner.* With our diverse portfolio of wire & cable brands, we offer a comprehensive machinery range—drawing, stranding, extrusion and sheathing lines—meeting all industry needs
2. *Reliability.* With a solid 125-year foundation in the industry, our machinery is not only high-performing but also requires minimal maintenance.
3. *Global reach.* With six manufacturing facilities and nine sales/service hubs across Europe, North America, and Asia, we serve wire manufacturers in more than 100 countries.

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