

4th Qtr 2010



InterWire
Atlanta, Georgia
May 3-5, 2011

WAI International
Tech Conference
Monterrey, Mexico
Oct. 18-20, 2010



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Eurolls Group News

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Sictra, A Eurolls Group Company, will be represented in North America by Cortinovis Machinery America beginning November 2010



Sictra S.r.l., a Eurolls Group Company, which specializes in the manufacture of Copper and Aluminum Wire Drawing machines, entered into the business in 1972. Sictra developed new solutions, designing and producing new machines while receiving several European and International patents. Sictra Products include Single and Twin Rod Breakdown Lines (Non-Slip and Controlled Slip), Single and Twin Intermediate Wire Drawing Lines for plain and tinned copper, Multi Wire Lines for plain and tinned copper, CCA and Alluminum alloy, Drawing lines for Trolley Wires and a series of Spoolers and Down Coilers.

Our facility in Monterey, Mexico (EUROLLS DE MEXICO) can handle the production of new TUNGSTEN CARBIDE rollers and can regrind worn rolls that are no longer in tolerance.

NEW CONCEPT FOR MULTIWIRE WINDING AND UNWINDING

In many industrial applications, the previous or subsequent operation greatly impacts the overall efficiency of the process as a whole. This is especially true in the wire and cable industry where multi-wire technology is used. In this practice, special considerations must be taken to match the bunching technology with the processes of wire winding in the drawing line and of the wire unwinding in the bunching lines.

There are two accepted concepts for wire winding: **dynamic spooler** and **static spooler**.

Dynamic spooler: This is the conventional system of winding wire (or a bunch of wires), where the bobbin rotates around a horizontal axis and pulls and winds the wires around the drum of the bobbin known as a horizontal dynamic spooler. The bobbin is supported by a rotating shaft (cantilever design) or by pintles (shaft-less). In both cases the wires are distributed between the flanges by a traversing system with a small drive. No twist is given to the wires which are **parallel wound**. There are two versions of **horizontal dynamic spoolers**: in **manual spoolers**, the empty bobbin loading, the wires stringing onto the bobbin drum, the wires cutting and locking and the full bobbin unloading are performed by the operator. With **Automatic spoolers** all the above mentioned operations are achieved by automatic systems and controlled in sequence by the spooler PLC automation. After winding, the full bobbins are rolled out on their flanges and handled and stored with horizontal axis, usually lifting them from the central hole with a shaft. The unwinding in the bunching lines is also achieved in two different ways.

For the manufacturing of regular strands (7 or 19 wires) the paying off process requires the separation of the wires distributing them regularly in the buncher lay plate. This system utilizes a **dynamic pay-off stand**, which is driven because of the high bobbin weight and holds the reel on a horizontal cantilever shaft. Bunched random strands are produced utilizing the same pay off stands without the need to separate the wires prior to the lay plate. An alternative system utilized for bunched construction only (random strands) is the **stationary pay off stand** with a flyer arm rotating around the bobbin. In this case the wires cannot be separated in the buncher lay plate as they get a twist with each flyer turn. This system requires the bobbin be tilted as the axis is vertical. This system cannot match the same bunch quality achievable with the dynamic pay-off stands.

Static spooler: In those spoolers a large bell, containing the bobbin, rotates around a vertical axis and pulls and winds the wires around the bobbin drum. The wire distribution between the flanges is achieved by the **vertical displacement** of the bobbin (lifting and lowering) which requires a **significant amount of energy** due to the heavy weight of the bobbin holder, the bobbin, and the wire itself.

The rotating speed of the bell changes as the bobbin is built up, consequently also the centrifugal force of the wires through the entire wire path changes as well as the correlated **wire stretching**. All the wire paths require frequent cleaning (copper dust removal) and expensive maintenance. An additional wire lubricator is needed at the spooler entrance.

The wires get a twist with each bell turn. These **spoolers are automatic** because the empty bobbin loading, the wires stringing onto the bobbin drum, the wires cutting and locking and the full bobbin unloading are automatic sequences controlled by the spooler PLC. The bobbins are handled throughout the machine (conveyors, winding station), laid on their flanges with vertical axis which makes subsequent factory **handling and storing very convenient** and easy.

Wire unwinding at bunching is accomplished by **stationary pay off stands** utilizing a flyer arm rotating around the bobbin axis. Wires can be separated at the lay plate for concentric regular strands (even if **separation is more difficult** with a stationary pay off stand than it is with a dynamic spooler and pay off stands) or kept together for random bunching.

How to combine the advantages of the different techniques?

SICTRA has found the solution. A series of **dynamic vertical automatic spoolers** has been developed: the BOV 630 and BOV 800.

Sictra— BOV 630 & BOV 800.

The bobbins are laid on their flanges, on their vertical axis, throughout the machine (conveyors, winding station) which makes subsequent factory **handling and storing very convenient** and easy like on the static spoolers. The **spoolers are automatic**: The empty bobbin loading, the wires stringing onto the bobbin drum, the wires cutting and locking, and the full bobbin unloading are automatic sequences controlled by the spooler PLC.

The variation of the bobbin rotating speed does not cause the wire to stretch which is an inherent problem on the static spoolers. The wires are distributed between the flanges by a **simple traversing system** with a small energy efficient drive. No twist is given to the wires which are **parallel wound** making it easy to separate the wires in the following operation. The bobbins are easily stored laid down on their flanges in stacks.

The unwinding in the bunching lines is achieved with specifically developed **vertical dynamic driven pay off stands**. Wire tension is adjusted via **low inertia pneumatic dancers** acting on AC motor drives fed by a common DC bus bar. Bobbin loading is easy and quick. No driving pin is needed since the bobbin is driven by the friction of its own weight. Wire separation at lay plate, when needed, is easy as **wires are parallel wound**.

Pay off stands are grouped in compacted racks.

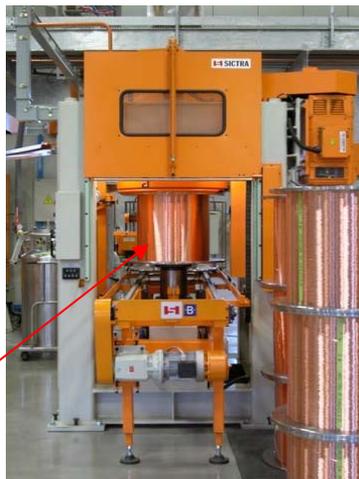
The combination of the vertical dynamic spooler and relevant driven pay-off stands summarizes the advantages of static spoolers over dynamic spoolers.

1. Handling is easy like with static spoolers
2. Automation is as efficient in static spoolers as it is in dynamic automatic spoolers
3. Winding is gentle like with dynamic spoolers
4. Power consumption is reduced like with dynamic spoolers
5. Maintenance is similar to dynamic spoolers, no wire passages need to be maintained on the rotating bell
6. No wire lubrication is needed
7. Wire separation on pay off stands is easy
8. Bobbin handling on pay off stand is easy

Overall dimension of the spooler and conveyors make it possible for them to be installed on lines replacing existing static spoolers



Vertical Dynamic Automatic Spooler with Rotating Spool



EUROLLS GROUP NEWS



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The EUROLLS GROUP was established in 1987. Over the past 22 years the company has grown significantly with the cooperation of customers like you. We strive to provide the highest in quality machinery and consumable products. Our service department is committed to understanding our customers' concerns so we can provide the quickest possible solutions to meet their satisfaction. Our commitment to research and development, staying current with technology, and employing the most experienced personnel are all key to the success of the EUROLLS growth process over the past two decades. We thank you, the customer, for your continuous support.



EUROLLS GROUP PRODUCTS

Multi Pass Cold Drawing Lines	Central Tube Stranders	Horizontal and Rosett Spools	Chain Welding Machines
Multi Pass Cold Rolling Lines	Electro Welded Collated Nail Making Machine	Lubricant Applicators	Chain Link Fencing Machinery
Descaling Rolls Pinch Rolls	Take-up Lines	Stress Relieving Devices	Rewinding Equipment
Guide Rolls Feed Rolls	Machines for Hexagon Wire Mesh and Gabbions	High Speed Nail Making Machines	Machines To Produce Hangers
Finger Bay Rollers	Descaling Units	Coilers Pulleys	Rolls for HOT Rolling Mills
Turkshead Rolls	Capstans	Barbed Wire Machines	Straightening Rolls
Tubular Stranders	Pointing Machines	Single Twist Cablers	Flattening Rolls
Double Twist Stranders	Rolling Cassettes	Planetary Stranders	Inline Compact Stretching Unit
Monobitorsion	Butt Welders	Automatic Chamfering Machine	Steel Fiber Production Machine
Double Twist Bunching, Stranding and Laying Up Machines	Straight and Cut Machines	Fixed and Collapsible Spools	Rolls For Cold Rolled Wire
Rigid Cage Stranders	Horizontal and Vertical Payoffs	Chain Bending Machinery	Lattice Girder Machines
			Automatic Spoolers