The wire and cable technology magazine of SAMPSISTEMI

WireUp

2016 edition

Contents

SAMPSISTEMI

Dear reader,

in 2016 Sampsistemi celebrates its 80th anniversary. When the company began in 1936, the original 15 employees in our first building - a small factory in Zola Predosa, near Bologna (Italy) - could not have foreseen that 80 years later, their tiny little business would be a global company with approximately 900 employees operating across 5 continents.

Those early employees were very creative in developing new manufacturing techniques to make the first mass-produced wire drawing machines, and that creativity has stayed constant through the generations of employees that followed. 80 years later, our flexibility and skillfulness will be on display in the trade shows, seminars and conferences we will take part in around the world.

The special cover page of our “Wire Up” magazine is a way to express our gratitude to the thousands of machine operators, service technicians, engineers, employees and managers that have served our company with loyalty and commitment over these 80 years. As we continue to build a stronger company thanks to new acquisitions and partnerships worldwide, we fully recognize that our people are the foundations of our long and fruitful success story.

Enjoy the read!

Antonio Maccaferri
President of the SAMP Group

80
1936 - 2016

Product news: Multiwire drawing of coated wire

New technologies in the drawing of coated wire

Just like many conductive materials, bare copper forms an oxide layer when exposed to normal atmosphere. This reaction accelerates with the increase of temperature, and at 180-190°C bright copper turns black in a few minutes. Oxide film is a poor conductor of electricity, reduces the reliability of connections and the compound hook-up in insulation processes. For these reasons, oxide film must be removed or prevented from forming. This is usually accomplished by coating the copper wire with a pure metal coating which oxidizes slowly at processing temperature. In special cases, alloy coatings or composite coatings plated in multiple layers are applied. Bare copper presents satisfactory characteristics at temperatures up to approximately 100°C.

The most common pure metals used for plating copper and copper alloys for conductors are tin, silver and nickel. In special cases, alloy coatings such as tin/lead or composite coatings (i.e. tin over nickel), plated in multiple layers, can be applied. The wire drawing and annealing process of copper and copper alloy conductors requires particular attention to avoid damage to the conductor surface.

Sequential plating technology is used when a reduction of intermetallic interaction is needed between the surface and the base metal while maintaining the favourable properties of the surface plating. One example is multiple plating of nickel/tin, where the nickel under the layer plating is used to mitigate “whiskers”, an unwanted growth of conductive filaments caused in a tin-plated copper conductor by the diffusion of copper from the base material into the tin layer. Whiskers can cause problems or failures in electronic applications.

Plated copper and copper alloy conductors are used for: wire for shielding, braiding and screening applications; strand for electrical and electronic applications; automotive signal cables; aircraft signal cables, communication and RF cables; mining cables; railways cables; rubber insulated vulcanized cables; special cables.

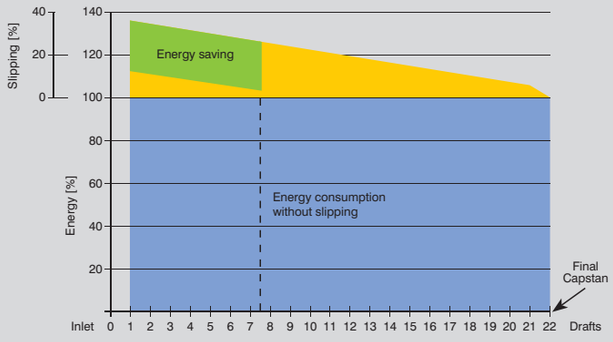
The ability to offer high quality lines for coated wire and strand market constitutes a competitive advantage over rival companies. At Sampsistemi, we strive to understand our customers’ markets and be aware of their needs. Therefore we pursue two parallel paths: on the one hand developing new, cutting-edge solutions and, on the other, making improvements to existing products to ensure that our customers always have the best.

In a highly competitive market, wire manufacturers ask to increase product quality and production reliability, whereas manufacturing costs and scrap rate are to be reduced. Over the last few years, there has been more demand for metal coatings for multiwire drawing machines. In particular, the number of requested wires has increased, the outlet diameter of each wire has become smaller and the requested production speed has risen.

The cross-section reduction of the outlet wire requires an increase in the number of drafts of the multiwire drawing line. The multiwire drawing machine is a slipping gearbox machine; therefore, a high number of drafts causes a high cumulative slip in the wire inlet side. For example, in a 29-draft machine setup, the cumulative slip at the wire inlet is approximately 45-50% (considering a slip of 1.5% for each die, and 3% at the final die). High slip has a negative effect on the quality of plated wires. This phenomenon increases the frequency of wire breaks, reduces the life span of drawing capstans and increases energy consumption and noise level of the multiwire line.

The Sampsistemi DM Platform has been specifically engineered by taking into account the splitting of gear transmission into two or more independent sections, with separate AC servomotors. This allows slip recovery between each section and at the inlet side. A 29-draft machine with three motors has a maximum slip at the wire inlet of 15-18% and reduces the slip at the separation by ca. 5%.

Power splitting also enables the use of compact AC servomotors with compact drives that allow a more precise regulation in the operation and



high efficiency of transformation current in mechanical torque at drive end.

A control motion system (see the chart above) is used for the synchronization of all motors. The reduction of slipping and the improvement in the quality of gear transmission, bearings, seals, etc., have allowed a reduction in the energy consumption by up to 10-15%, consequently abating production costs. In order to reach the best wire quality surface, zirconium oxide pulling rings have been adopted. The drawing of metal coated wires requires an increased amount of lubricant compared to bare copper, better temperature control and simplified cleaning.

Die holders have spray jets on both the inlet and outlet cones to improve wire lubrication within the die to reduce friction and to facilitate cleaning of the inlet/outlet cones themselves, thereby enhancing product quality and prolonging the life span of dies. There is also a spray for pulling rings to reduce the friction with the wire.

The lubrication of the final die is critical as it is here that the wire attains its minimum diameter. At maximum speed, the metal coating is at minimum thickness and the lubrication is usually only on the entrance die cone. For these reasons, all Sampsistemi DM multiwire drawing machines have a pressurized separate lubricant supply circuit for their final dies.

The annealing process is of utmost importance because the annealing path must ensure the integrity of the wire coated surface, the requested physical properties (mechanical strength, elongation, conductivity and resistance) and maintain the diameter and roundness of the wire. Wire quality and production efficiency are also influenced by contact ring surfaces.

To satisfy these requirements, the Sampsistemi multiwire annealer platform includes a number of technical features, such as multimotor technology, adjustable pre-heating length, a wire walker before contact rings and a cleaning device on contact rings.

A traditional Joule effect annealer is a machine with one motor and a belt transmission that connects all contact rings with a fixed ratio between each axis. This ratio is a compromise for the whole wire range diameter of the annealer and it is not possible to set an optimized adjustment for each wire diameter. This characteristic causes surface damage, reduces contact ring life and increases production costs.

In the Sampsistemi Multimotor Annealer Platform, which has been designed for the market of coated wire, the system is able to set up production parameters, in particular the kinematic ratio between each axis, to form a production recipe stored in the HMI panel.

The Annealer Platform is enriched with the latest technological solutions available, in particular the development of an electronic equipment that reduces current distortion (THD-I) and energy waste (PF > 0.90).

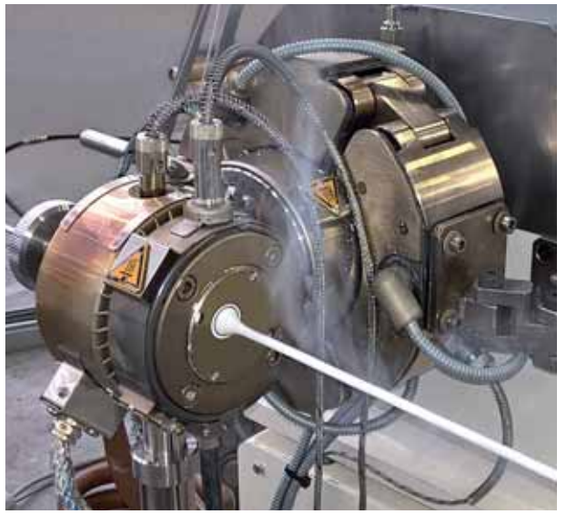
References:
1. Sampsistemi Technical Presentation, Intercable Meeting, December 2015.
2. Sampsistemi Technical Presentation, 6th CabWire World Technical Conference, Milan, November 2015.
3. www.calmont.com, www.fiskalloy.com,
4. ASTM-B33, ASTM-B298, ASTM-B355

Product news: Extrusion solutions

Extrusion Solutions for High-Temperature Cables

The most recent developments for automotive, aerospace and submergible pump cable applications require insulation materials like PEEK, FEP, MFA, PFA, ETFE and X-ETFE with temperature resistance of more than 200°C (approx. 400°F). At Sampsistemi, the experience with high-temperature materials dates back to over 20 years ago and continues today with a number of innovative solutions according to different insulation materials, specifically engineered to guarantee scrap reduction with the easiest line set-up. Our constant evolution is a combination of research, high-technology machines and process knowledge.

To meet our customers' most demanding requirements, Sampsistemi has recently developed a new family of extruders that allow an improvement of production capacity,



HT B1 high temperature insulation line up to dia. 18 mm

CJ-TEK
YOUR RELIABLE PARTNER
FOR CROSSHEAD SOLUTIONS

guaranteeing the highest quality level of final products. High-temperature extruders present dedicated screw profiles and special thermo-regulated barrels.

An example of these solutions are the Sampsistemi HT A1 and HT B1 lines for the insulation of high-temperature materials with different layers. These lines are engineered to apply insulation and jacketing on conductors with wire cross-section from 30 AWG (0.05 mm^2) up to 4/0 AWB (107 mm^2). A homogenized insulation with the repeatability of electrical and mechanical cable performance is guaranteed by an accurate line temperature control system that manages the several thermo-regulated zones present in the line as well as the insulation adhesion on conductors. Moreover, dedicated alloy materials guarantee the cable quality and the machines longevity.

Thanks to our long-time collaboration with CJ-TEK, our Swiss partner for cross-head technology, Sampsistemi can guarantee the highest performance available on the market in terms of linear speed, wire concentricity and insulation properties.

Particular attention has been paid to the very compact line design (up to 20% of space saving

HT A1 high temperature insulation line up to dia. 6 mm

compared to standard lines currently available on the market) by means of a revolutionary cooling trough line.

All machinery present in the HT A1 and HT B1 lines are internally developed, manufactured and distributed by Sampsistemi, like for example the Dual Take-Up, that ensures constant production speed during reel changeover, increasing the customer's productivity and reducing the wire scrap length.

All parameters can be easily managed via the Sampsistemi supervision and control unit, through which production can be automatically programmed and a number of statistical and graphical analysis can be carried out.

Solutions for HV cables

The existing wide range of Sampsistemi products for the manufacturing of high-voltage cables has been first launched into the market in 2009, when we started the production of a new family of take-up and pay-off solutions, which are now available for reels with max. width 5000 mm and max. weight 70 tons.

Our HV cable sheathing solutions have been installed in a variety of configurations all around the world and represent a perfect example of tailor-made products.

The Sampsistemi sheathing lines for HV cables are engineered for cables with a diameter of up to 200 mm (70 kg/m), insulated and sheathed with thermoplastics or thermosetting materials. Due to the weight and high value of these cables, their properties must not be damaged during the working process.

Therefore, Sampsistemi has paid particular attention to the ergonomics and easy setting up of the lines.

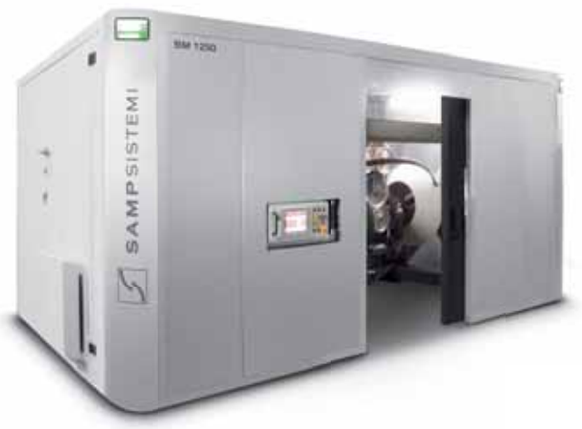
Attention to detail is evident in every machine feature: for example, thanks to our solution, the cable cutting process can be carried out by only one operator in completely safe conditions and without stopping the production line.

These products use a number of protective solutions below the sheathing. For this reason, our lines have been engineered to work in tandem with tape applicators (corrugated or smooth type), lead extruders and bitumen applicators.

Another innovative characteristic is the cable marking process (brand name and length meter counter), which can be carried out on more sides of the same cable simultaneously and applied to different sheathing materials.

The new Sampsistemi solutions allow manufacturers to produce HV cables with an excellent cable surface quality and an ever-growing energy efficiency, while at the same time saving material costs.

Bunching Machine BM 1250



Extensive research and the continuous improvement of existing technology (over 70 machines of this kind are currently in production) has improved the Double-Twist Bunching Machine BM 1250, which is designed for reels with a flange diameter in the range of 630-1250 mm and a total weight of 4500 kg when filled (in case of copper strand).

Some of the main machine features are:

- Large flexibility range of working section (1 ÷ 125 mm²);
- Suitable for stranding copper and aluminium wires and laying up insulated cores;
- Open bows with carbide or ceramic eyelets or ceramic coated rollers;

- High performance (up to 2000 TPM and linear speed 300 m/min depending on process);
- Improved wire quality due to large pulleys diameter;
- Optimal tension on the strand control due to built-in dancer, with electronic regulation via operator panel;
- Drive architecture Premium Line for energy saving purposes;
- Reduced preventive maintenance due to AC and brushless motors;
- HMI colour touch screen 10” for line control.

The machine is positioned inside a hut-shaped protection that ensures sound abatement and accident prevention. In addition, a patented electrical cabinet placed inside the cradle includes all drives and I/O to manage all equipment inside the bows. The communication between this cabinet and the main one occurs through a wireless safety integrated communication system.

The Sampsistemi manufacturing programme also includes a pre-twister, an equalizer and a wide range of dynamic and static pay-offs.

TRAVARTEC
ALUMINIUM WIRE-DRAWING AND STRANDING

A passion for aluminium

Located in a unique landscape where nature is at its most enchanting, the province of Brescia is a land of scenic beauty containing many locations of archeological, artistic and historical interest. The largest province in Lombardy, it includes three beautiful lakes (Garda, Iseo and Idro) and three valleys (Camonica, Trompia and Sabbia).

The landscape is varied, from the small marinas of Lake Garda and the green hills of Franciacorta to the ski slopes, small villages and historical town centers.

However, the Brescia province is not only a peaceful mix of hills and valleys. It is also home to a very promising company, Travar Tec S.r.l., specialized in producing aluminium and aluminium alloy wires, bars, strands and flexible ropes for mechanical and electrical appliances.

Travar Tec derives from over 30 years of experience of Travar S.p.A. and from this company inherited a profound knowledge of the processing of aluminium and aluminium alloys, both in terms of wires and ropes. The Italian company is among the leaders in its field thanks to efficient management skills, solid financial investments and high-qualified technicians.

The company's recent extraordinary growth comes from a deep understanding of materials and the ability to develop high-quality products for a range of applications. Indeed, a new division dedicated to the production of semi-rigid ropes has been recently opened. Travar Tec is ISO 9001 and ISO 14001 certified and is undergoing the OHSAS 18001 certification.

The company has recently moved to a brand new production plant. Located in the industrial area of Rodengo Saiano (Brescia), it makes up 4,000 sqm of production area and 500 sqm of offices. The plant boasts a brand new line for the production of flexible conductors in aluminum and aluminum alloys with a production capacity of 12,000 tons/year and a particular focus on the technological development for the automotive market.

From Sampsistemi, Travar Tec has recently purchased a rod breakdown machine RB 450 and a multi-wire drawing line DM 105, online annealing system included, for aluminium and aluminium alloys.

Customer profile: Travar Tec

We asked Mr. Paolo Stefini, Managing Director of Travar Tec, to tell us more about his company.

What is the secret of your success?

The success of Travar Tec is based on our solid technical and technological skills and on our knowledge of the processing of aluminium and aluminium alloys, which are somehow new and less common materials in industrial applications. Nowadays we are experiencing an unprecedented and ever-growing demand for aluminium products, for example in the automotive field, where a reduction in fuel consumption and a subsequent emissions abatement is of utmost importance to follow the stringent standards defined by the European Union directives. Therefore, the use of lighter cables and components made of aluminium or aluminium alloys becomes essential. This is true not only for vehicles, but also for electrical appliances, energy cables, looms, etc.

Which is the key factor in choosing your suppliers?

There are many factors involved when choosing a supplier. For Travar Tec, the most important ones are the history of the company, the technical and technological skills, reliability and the ability to work closely together with us. Our suppliers are all experts in their fields, willing to grow together, able to identify cross-functional synergies to achieve the desired goals.

Which were the main characteristics of Sampsistemi that allowed you to reach your goals?

We have particularly appreciated two main characteristics. First of all, the excellent quality of the Sampsistemi machines, which are entirely developed and manufactured in Bentivoglio (Bologna), and feature the typical “Made in Italy” flexibility and cleverness. Secondly, the technical and managing skills of all Sampsistemi engineers, who have been a valuable asset in planning and successfully implementing the project. As with all new things, it was of utmost importance to build a close-knit team of passionate, efficient and skilled professionals who worked together towards a common vision, rather than wasting energy in asserting their own rights.

Which concrete benefits, direct or indirect, did you derive from the co-operation with Sampsistemi?

Paolo Stefini
Managing Director of Travar Tec

Sampsistemi has greatly improved our production processes and technological capacity. As a result, we have increased our productive output fourfold, going from 300 tons/month to approx. 1,200 tons/month, thereby reducing transformation and internal costs and at the same time improving the final quality of our products. Our customers and suppliers have rewarded our efforts so far. Thanks to their continuous trust and support, we have become one of the leading companies in our field.

What plans and targets do you have for the future?

Travar Tec is widely considered a strong, stable and financially sound company, with a forward-looking approach and a young nature, in spite of deriving from over 30 years of experience. Of course, our main goal is to grow our business and expand into new markets, both nationally and internationally, keeping up with new production trends, always offering our customers the high-quality and innovative products they have become accustomed to. In particular, we will focus on the challenging automotive market. We like the fact that this sector is extremely dynamic and keeps coming up with new ideas.

Dericou 德力

Kunshan Dericou Copper Co., Ltd. was established in April 2013 and its manufacturing base is located in the Kunshan German Industrial Park in Zhangpu Town, Kunshan, Jiangsu Province, within an area of 210,000 sqm. The surrounding traffic, including the inland trucking, marine and rail transportation, is very well developed. The company is located only 34 kilometers away from Shanghai Hongqiao Airport and 50 kilometers away from Taicang Port.

Kunshan Dericou Copper is focussed on the manufacturing of copper rod and wires. Their main products include 8 mm hypoxia copper rod, 2.6 mm copper wire, fine wire, bunched wire and tinned coated wire, which are widely used in LAN and telephone communication cables, power cables, electrical cables, enamelled wire, etc. From the German company SMS Meer, Kunshan Dericou Copper has purchased a continuous casting line model CR3700 with the world's largest single-machine production capacity and an annual output of 400,000 tons of 8 mm copper rod.

In addition, complete manufacturing solutions for wire drawing, bunching and tinning lines have been imported from Sampsistemi, Italy, for an annual output of 100,000 tons of fine copper wire and a total expected annual turnover of over 20 billion RMB (3 billion USD).

We have asked Mr. Jiang Xiangdong, Sales & Marketing General Manager, to tell us more about his company.

Which is the key factor that enabled your company to start production so quickly?

Kunshan Dericou Copper Co., Ltd. is committed to promoting and enhancing human values such as honesty, dedication and self-discipline, and to improving the coordination and cohesion of all of our staff. Through our strict quality policy, efficient management skills and the integration of advanced technology, equipment and processes, we maximize the initiatives of our employees, strengthen our corporate culture and cultivate our working values to enhance the executing abilities of our entire staff.

Which are the main things you consider when choosing your suppliers?

For our company, the most important characteristics when choosing our suppliers are cost effectiveness and the ability to exploit our potential to the fullest. We carefully select suppliers who can offer high-level technical solutions and all-round after sales service with fast response times, and not just the equipment itself.

As for the equipment, considering the current economic situation in China, today we are increasingly paying attention to cost performance, high production capacity and low power consumption. Other important factors are an environmentally friendly production, low maintenance levels and spare part costs.

How did your experience with Sampsistemi meet your expectations?

Sampsistemi undertakes thorough training programmes for our employees to ensure that the purchased equipment manufactures products of the highest quality in compliance with the highest international standards. We chose Sampsistemi because, whenever we request any technical or process support, they are readily available to listen and help us find and implement the right solutions in a timely manner.

At the same time, we are very satisfied with the design concept of Sampsistemi, which focusses on reaching the highest efficiency of the equipment while diminishing production costs. This is very important to reach our current production targets.

We know that Sampsistemi is committed to our complete and total satisfaction and hope to maintain a long-term and friendly business relationship with each other.

What plans do you have for the future?

As an operating unit that has just started production, first we are targeting on increasing our capacity for wire drawing and wire bunching. Secondly, we wish to enrich our product portfolio, adding products like silver-coated wire, tinned-coated wire, nickel-coated wire and also fine wire with a diameter below 0.1 mm. Additional future targets will be copper alloys and other special materials.

Mr. Jiang Xiangdong
Sales & Marketing General Manager of Kunshan Dericou Copper

昆山德力铜业有限公司于2013年4月成立，生产基地位于江苏省昆山市张浦镇德国工业园区内，占地21万平方米，距离上海虹桥机场34公里，太仓港50公里，陆海铁运交通线密集发达。

公司专注于铜杆丝加工制造，产品主要包括8mm低氧光亮杆、2.6mm拉丝、铜细线、绞线、镀锡线。广泛用于通讯线缆、电力线缆、电子连接线束、漆包线等市场。公司全套引进世界上单机产能最大的德国西马克梅尔公司出品的CR3700连铸连轧生产线，年产8mm铜杆40万吨。全套引进进口意大利桑浦拉丝、束线、镀锡线等设备，年产10万吨精加工铜线丝，预计年销售额超过200亿人民币。

贵公司能够如此快速的投产主要取决于哪些因素?

昆山德力铜业致力于人文建设和人心塑造，提高组织协调和凝聚力。通过严格的质量方针和管理规范，融合先进的技术装备和工艺流程，最大程度发挥员工积极性，加强企业文化及价值观培养，提升员工工作执行力。

你们在选择供应商时考虑的重点是什么?

对我们公司而言，投资生产要考虑的重点要素是符合公司战略发展和成本效益的最大化。我们选择的供应商首先应能够提供系统解决方案和完善的售后服务体系，包括技术水准和响应速度，而不仅仅是设备本身。
对于设备而言，在当前中国的经济环境下，我们非常看重设备本身的性价比，但更注重设备的产能和消耗；是否节能以达到绿色生产和设备后期的维修成本和服务水平也是我们考量的重要标准之一。

Customer profile: Kunshan Dericou Copper Co., Ltd.

您认为桑浦公司是否满足了你们的要求?

桑浦公司提供了整套的方案，从员工培训计划开始，直到最终确保设备能够生产出满足最高国际标准要求的高品质产品。我们选择桑浦是因为在遇到技术问题或需要流程支持时，桑浦公司总能够帮助我们及时找到解决方案并实施方案。
同时，我们也很认同桑浦设备的设计理念，这些技术和理念特别关注于设备效率的提高和能耗的减少，这对于当今的生产尤为重要。
我们对桑浦公司的承诺非常的有信心，也希望和桑浦公司保持长期的友好合作！

贵公司对未来有哪些计划?

首先，我们要增加拉丝、束线产能，丰富涂覆导线如镀银、镀镍、镀锡等双零导线；其次，丰富产品结构，铜基合金材料是我们的发展方向。

LIFE+Inno.Pro.Wire An all-Italian project

innoprowire
the new green-generated wire

The LIFE+Inno.Pro.Wire is an all-Italian pilot project stemming from the partnership between the Maccaferri Industrial Group (through its companies Sampsistemi and Officine Maccaferri) and RadiciGroup (through Radici Novacips). The project has been selected for the European Commission's LIFE+ programme, the European Union financial instrument for the environment, and awarded financial support for a period of 3 years.

The LIFE+Inno.Pro.Wire project aims to design an innovative process with lower environmental impact for **producing extruded steel wire** to be used in making metal net protection and containment structures. The sustainability aspect of the project is the use of polyamide 6 (PA6 engineering plastics from the RADILON® range) as a viable alternative to PVC for coating the steel wire. Tests will be conducted not only on conventional PA6, but also on PA6.10 engineering plastics produced using 64% biopolymer manufactured from sebacic acid.

The idea behind the project is very simple: the traditional process, in which steel wire is plated with a very thick zinc coating layer and then PVC coated, is an energy hog. The proposal put forth by Officine Maccaferri – world leader in the research, design and manufacture of advanced environmental civil engineering solutions – is the development of a new and innovative production process in which the zinc coating process is minimized. Polyamide 6 plays a central role in this project because, compared to PVC, it ensures better technical and environmental performance.

In this project, Sampsistemi's contribution is represented by the industrial know-how acquired in the world of steel rope coating, particularly by reducing the energy consumption of the lines engineered thanks to the latest developments and technological innovations.

"The call for proposals by the European Union, provides an exciting opportunity for companies interested in developing industrial proposals for

MACCAFERRI
Engineering a Better Solution

SAMP

RADICI GROUP

Life

strategic sectors such as the environment, biodiversity, environmental policies and governance, information and communications," explains **Claudio Colibri**, Corporate R&D Manager of Officine Maccaferri.

Over the years, Officine Maccaferri, Sampsistemi and RadiciGroup have made environmental sustainability the fundamental development criterion. We expect many benefits from this project, from the development of a replicable methodology for the eco-sustainable production of steel wire coated with polymeric material using new materials and new processes, to the set-up of a demonstration production line to show the savings in materials and energy by properly documenting process yield and product performance. And that is not all.

We also expect to contribute to the application of the experimental PEF methodology for the environmental evaluation of processes and products, and to promote wider acceptance of the environmental factor as a parameter in public bidding for road construction and maintenance."

Erico Spini, Marketing & Application Development Director of the RadiciGroup Plastics Business Area, illustrates the technical aspects of RadiciGroup's contribution to the project: "Polyamide is a viable lower environmental impact alternative to PVC as material for use in extruded steel wire coating. The excellent technical characteristics of this material has allowed us to set ambitious objectives for the LIFE+Inno.Pro.Wire challenge, such as a 20% reduction in wire coating thickness and a 30-50% increase in the service life of the final product, the metal gabion.

Among the advantages of using polyamide are a reduction by approx. 20% in wire weight for a coating of equal thickness and improved resistance to mechanical damage during the installation and servicing of the gabions."

The LIFE+Inno.Pro.Wire project is also on the web at **www.lifeinnoprowire.eu**, where users can find a complete description of the project, its objectives, achievements and developmental stages.

Organisation news: Cortinovis do Brasil

Sampsistemi acquires Cortinovis do Brasil

Sampsistemi is proud to announce the recent acquisition of Cortinovis do Brasil, a well-known and trusted player in the Brazilian and South American market for over four decades.

By means of this, Sampsistemi strengthens its presence in a strategic market like South America, and Brazil in particular, broadening the company's product portfolio and allowing the Italian company to achieve an important competitive advantage.

Cortinovis do Brasil Indústria e Comércio de Máquinas Ltda

Avenida Piraporinha, 1073-G10
São Bernardo do Campo (SP)
09891-000 - Brazil
Tel. +55 11 4391 51 11
Fax. +55 11 4341 8787
E-Mail: clemente@cortinovis.com.br

The representative office of Cortinovis do Brasil in São Bernardo Do Campo, SP will continue its activity in the same location and with the same skilled and experienced staff that local customers have known for a long time. The continuity of the actual product portfolio will be ensured and the local offer will be increased by the complete production range of Sampsistemi.

At the latest trade show Wire South America (São Paulo, October 6 to 8, 2015), the two companies have already introduced a joined company portfolio that allows them to be the first and only supplier in South America to locally produce the entire manufacturing line for wire and cable, from rod breakdown to the extrusion process.

The first result of this important partnership was the joined development and local manufacturing of a complete drawing line for 24 wires, which was recently installed in the plant of a Brazilian customer.

"We are extremely pleased to welcome the Cortinovis do Brasil family to our company," said **Federico Bussola**, Sales Director of Sampsistemi. "This landmark transaction provides additional growth opportunities as we build upon the complementary capabilities of each company, including their talented people and innovative technologies."

"Today is an exciting milestone in the history of Cortinovis do Brasil, which signals the transformation of two companies into one extraordinary opportunity for the future," said **Raul Pascoareli**, General Manager of Cortinovis do Brasil. "Together with Sampsistemi, we remain focused on delivering product quality, reliability and innovation."

José Duran

Controls Engineer
Extrusion Manager

Organisation: Meet our Service Technicians

Davide Prodigo

Internal Testing and
Service Technician

Denis Minghetti

Internal Testing and
Service Technician

Hamed Shafiee

Internal Testing and
Service Technician

A brand new digital strategy

The social media have drastically changed the way people all over the world interact and communicate, and the whole SAMP Group is ready to face this challenge with a new digital strategy. Using the platform that our customers use is a *condicio sine qua non*, and being there with relevant contents is our top priority. We believe in sharing information and, from now on, we will use and exploit two main channels to the fullest: websites and social networks. All of the companies of the SAMP Group have their own new platform and they all share the corporate SAMP social networks. Therefore, stay tuned and start following us on LinkedIn, Facebook, Twitter, YouTube and Google+!

Sampsistemi's website has been totally revised in order to offer the best navigation experience to all kind of users. Our customers' expectations are high and extremely different one from the other. For this reason, in order to satisfy all of you, we have developed four different navigations ways.

You will not waste your time searching anymore! In our new site, you will be able to search by sector, application, product and through our special hexagons. Contents have been completely updated, the contact page re-designed, so it will be much easier to contact the right person and receive a prompt response from Sampsistemi. These are just a few examples of the changes we have made. To find out all of the others, go directly to our new website!

In editing the website, special attention has been paid to the style, which looks fresh, direct, simple and dynamic. We aimed at creating a useful, responsive and engaging outlook, and we believe that we have reached our goals!

Having new digital platforms without updated contents would be a big fail, so we have also developed an editorial calendar, which will cover the main topics sharing latest innovations, data, news etc.

All of these information will be customized *ad hoc* according to the specific channel:

- For synthetic, essential and informative messages: follow us on **Twitter**
- For more professional-oriented posts: follow us on **LinkedIn**
- For branding posts and for an internal sight of all sister companies: follow us on **Facebook**
- If you are bored to read: go to our **YouTube** channel and watch all of our videos!

Soon we will also be on **Instagram**, to let you discover mechanical engineering from an artistic point of view!

Summing up, we are committed to providing you with the best; therefore, we look forward to your visit on www.sampsistemi.com and to start talking to you on our new social networks!

Follow our Social Network Accounts

LinkedIn: SAMP S.p.A.
Twitter: @SAMPspa
Facebook : SAMP SpA
YouTube: SAMP SpA
Google+: SAMP SpA

Our shows in 2016

Wire & Tube Düsseldorf
Düsseldorf, Germany
April 04-08, 2016

Wire Expo
Uncasville, CT (USA)
June 07-09, 2016

Wire China
Shanghai, China
September 26-29, 2016

Wire & Cable India
Mumbai, India
October 05-07, 2016

Our conferences in 2016

Advanced Cable Middle East
Dubai, United Arab Emirates
February 02-03, 2016

Cabex
Moscow, Russia
March 21-23, 2016

Iran International Aluminium Conference
Tehran, Iran - May 11-12, 2016

Intercable Technical Seminar
Helsinki, Finland
June 13-17, 2016

CRU World Wire & Cable Conference
Milan, Italy
June 20-22, 2016

Aluminium Wire & Cable Conference
Detroit, MI (USA)
July 19-20, 2016

IWCS Conference
Providence, RI (USA)
October 02-05, 2016

ArabCab
To be defined
Autumn 2016

Intercable Technical Seminar
To be defined
Winter 2016

The history of SAMP

The history of SAMP and its brands has always been eventful and it represents a perfect example of company verticalization. At the end of the 19th century, in Casalecchio di Reno near Bologna, Italy, our current President's grandfather's uncle began to use wire mesh to assembly gabions (boxes filled with rocks, concrete, or sometimes sand and soil) to repair dams destroyed by floods of the river Reno. At the beginning of the 20th century, he purchased a patent for a new type of wire mesh box gabion and started the industrial production of gabions for civil engineering use.

As a consequence in **1936** Gaetano Maccaferri, our President's grandfather, started out with a small workshop for the production of wire machinery in Zola Predosa (Bologna). The production included wire drawing machines, looms for weaving metallic meshes and general mechanical parts. He called his company **S.A.M.P.**, which translates from the Italian as "Company for Precision Metalworking". Since it was difficult to find good quality gears at that time, he started manufacturing his own.

During the Second World War SAMP supplied the Italian air-force with precision gears, but the demanding quality requirements forced the company to produce its own high-precision gear cutting tools. For the same reason, the company was later to start developing its own tool grinding machinery, manufacturing equipment that set the standard at those times. With a wide range of quality gear cutting tools on board by 1949, SAMP decided to establish **Samputensili**, an *ad hoc* structure and trademark through which to trade these products. In the years that followed this new company was to grow into a worldwide supplier of gear cutting tools and, later, also of

grinding machines for cylindrical gears, shafts, worms, rotors and screw threads.

The second spin-off of SAMP, **Sampingranaggi**, came into being in 1973, extending the company's gear production program to include bevel gear sets and high-precision gearboxes. Also in 1973, the company Mc Draw was founded in Williamsport, MD, later to become our sales and distribution office **SAMP USA, Inc.**

In 1997 SAMP's wire drawing machinery division took the name of **Sampsistemi** and, thanks to the acquisition of competing companies, it broadened its portfolio to include extrusion equipment for the manufacturing of finished cables.

In 2000 Sampsistemi opened a service center in Shanghai, which four years later turned into a manufacturing unit. Today **SAMP Machinery (Shanghai) Co., Ltd.** is not just a production plant; it is also a sales branch with a remarkable degree of know-how.

In 2009 SAMP moved to a brand new plant in Bentivoglio (Bologna), Italy, which integrates all European manufacturing sites in one modern, state-of-the-art plant.

Starting from January 1, 2016, our Group has given itself a new organizational structure featuring four market-leading companies, which operate independently in their relevant sectors:

- Sampsistemi S.r.l.
  (Wire and Cable Manufacturing Machines);
- Samputensili Machine Tools S.r.l.
  (Machine Tools for Gears, Shafts, Worms and Rotors);
- Samputensili Cutting Tools S.r.l.
  (Gear Cutting Tools);
- Sampingranaggi S.r.l.
  (Gears and Gearboxes).

All companies are 100% owned by the holding SAMP S.p.A., a company of the Maccaferri Industrial Group.

One of the main objectives of this new set-up is to become more incisive in the relevant sectors, while sharpening our focus on the specific market requirements of each individual company. Furthermore, each enterprise benefits from enhanced independence, stronger financial resources and flexibility to adapt quickly to market and customer dynamics.

We are fully convinced that this step will allow each company to become stronger and better positioned strategically, while delivering important advantages to our customers, who will benefit from a lean organizational structure, faster response times and in general a more focused approach in addressing their needs.

80
1936 - 2016

SAMPSISTEMI

Publisher & editor:
Sampsistemi Srl
Via Saliceto, 15
40010 Bentivoglio (BO), Italy
Tel.: +39 051 63 19 411
Fax: +39 051 37 08 60

info@sampsistemi.com
www.sampsistemi.com

Please send your comments
and suggestions to
marketing@sampspa.com

Published by Sampsistemi Srl
© contents copyrighted by Sampsistemi Srl,
its partners and customers.
No part of this publication may be reproduced or
transmitted in any form or by any means, whether
electronically or mechanically, including photocopying,
recording or by any information storage and retrieval system,
without permission in writing from the publisher.

Company of:
SAMP
www.sampspa.com

SAMPSISTEMI
www.sampsistemi.com

Gruppo
Industriale
Maccaferri