



OPEN FACTORY @ De Angeli Prodotti

The company opens up
to everyone

*«Coming together is a beginning.
Keeping together is progress.
Working together is success.»*

Henry Ford

OPEN FACTORY

@ De Angeli Prodotti

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everyone**



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www.deangeliprodotti.com

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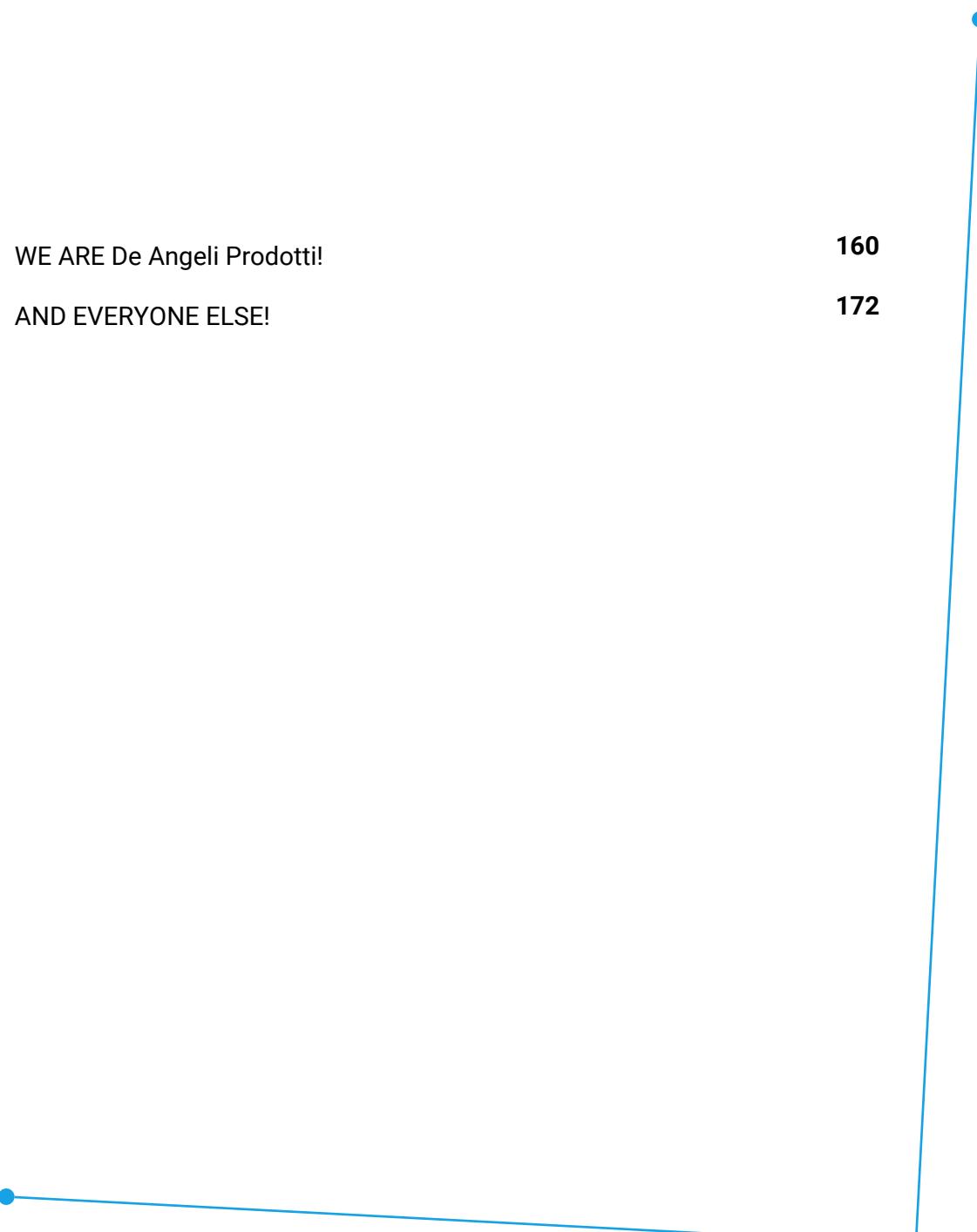
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WE ARE De Angeli Prodotti!

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AND EVERYONE ELSE!

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OPEN FACTORY

@ De Angeli Prodotti

The company opens up to
everyone





Welcome to De Angeli Prodotti!

Letter from the President for Open Factory 2023

Dear Everyone,

Why Open Factory?

De Angeli Prodotti decided to take part in **Open Factory 2023** because it represents the most significant opening and promotional event in the context of industrial and manufacturing culture.

This initiative aims to highlight and raise awareness among the public of companies that, like ours, contribute to the value of the Country.

The aim of Open Factory is to make people understand the cultural, social and economic importance of the enterprise.

Opening the doors of factories is a key gesture to make people realise the crucial role they play in the future of the country, especially for young people who can discover the beauty of **Made in Italy** and get involved for their own professional growth.

The Open Factory initiative allows us to tell the story of our company, strengthen ties with the community and our employees, attract young talents and make people feel that factories are a shared value for everyone.

With this transparent gesture of opening the doors of our company, we want to show the

community in which we live and the institutions that **factories are culturally stimulating and safe environments** and represent an element of **widespread and shared wealth creation**.

What is the real role of De Angeli Prodotti?

Regarding our specific role in the overall economic and social system, we have realised and well defined over time that **our raison d'être is to develop and produce modern conductors that promote the Energy Transition**, so that **customers, suppliers, employees, the entire community and the ecosystem can benefit equally**.

Indeed, the **Energy Transition** promotes **decarbonisation**, which is essential globally to slow **climate change**, requires innovation and massive investments in **renewable energy**, and is also central to the **e-mobility challenge**.

We must consider in our product development that the **connection of multiple intermittent sources of power** generation requires a more **meshed, secure and flexible power grid**, which must take advantage of **digitisation** as an empowering and pervasive technology.

Moreover, we should not forget that in the industrialised world, an unprecedented project to review the production, economic and consumption model, oriented towards **sustainability**, is currently in progress, while in **developing countries**, new **large segments of population** are accessing **electricity** for the first time.

Therefore, we want to play a leading role with all our resources, energy and innovation capacity in the **green revolution** necessary to save the planet!

What is our organisation model?

First and foremost, **we have always wanted to base our success on the great manufacturing skills of our Country**, investing in the **professional growth** of the People in our Team, in **Research and Development** and in many **new modern plants**, never listening to the sirens of delocalisation to areas with lower costs.

As a result, over the years we have created and shared clear **founding values at all organisational levels**, **Quality, Innovation, Balance, Team Spirit and Resilience**, which have allowed us to face tough challenges and take advantage of interesting opportunities over the decades.

We have an **Organisational Behavioural Decalogue** that makes **Trust and Delegation** our driving force, together with a **Taste for Challenge**, the **creative involvement of the whole team** in **Continuous Improvement**, and the **close technical collaboration with advanced customers**.

Given that we run a large factory that **produces and handles tens of thousands of tonnes of products** each year, we put **Safety first**, and we pay the utmost attention to it and invest accordingly.

For years we have been implementing a very ambitious and pragmatic plan **to train and empower young talent**, which already allows us the **generational transition to smart young people who are prepared for the future development of the company**.

Why the decision to collect the Newsletters in this volume?

We wanted to take the opportunity of Open Factory to collect in this volume the **Newsletters** that we have shared monthly using this format **since 2016**.

They collect **very heterogeneous articles** ranging from **business successes, investments, innovations, the entry of new colleagues** rather than the **retirement of the organisation's big players**, to the **simple day-to-day life** of the company.

We believe that this **overview** can give a clear impression of the great dynamism of our **organisation**, and allows us to grasp how the company's logic finds concrete application over time in **thousands of large and small, but coherent and convergent actions**. These actions are implemented by a cohesive and diverse team, and are comprehensively directed towards the **Mission of Ecological Transition**, via many **more and more Modern Conductors**, thanks to an **Organisational Model based on Trust**.

Together with the Newsletter, other sections and inserts in the book will allow you to learn more about our mindset, some of our colleagues and our technologies.

You will also discover that De Angeli Prodotti is currently engaged in a major **investment plan aimed at the development of Electric Infrastructures and high-tech engine technologies for electric cars**, and is proceeding with the **selection and training of 100 new workers, labourers and technicians** to increase production capacity, and develop new **digitalised products**, such as the extraordinary **Smart Conductor** for the Intelligent Electricity Grid of the future.

Enjoy your reading and if you came to visit us, have a good time!

Luca Mora

CEO De Angeli Prodotti S.r.l.



De Angeli Prodotti for beginners





De Angeli Prodotti

Every wire, everywhere.

We are located in Bagnoli di Sopra, in the province of Padua, at Viale dell'Industria 1.

The company (which has around **400 employees** and a turnover in 2023 of around **EUR 250 million**) is active in the field of **electric power cables and conductors**, in which it has become a **leading player throughout Europe in the course of three decades**.

De Angeli Prodotti specialises in the production of **power transmission conductors**, the ones you see on **high voltage towers**, **copper catenary lines for electrification in the railway sector**, and **isolated conductors for the windings of all electrical machines**, such as motors, generators and power and distribution transformers.

Through the **processes of wire drawing, rolling, insulation with enamels or special tapes and roping**, we produce cables which are essential for the generation, transformation and transmission of energy, which are the basis of our economic and industrial system and very important for the Ecological Transition.

For many years now, the company, thanks to the progressive strengthening of its **Technical Department and Research and Development Laboratories**, has identified **Innovation and Sustainability** as the leading threads in the development of new high-tech products and the improvement of production processes, which is pursued through **cooperation with important centres of excellence such as the University of Padua**.

On the occasion of Open Factory 2023 De Angeli Prodotti virtually opens the doors of its production plant to show how **industrial metals such as copper, aluminium and steel are processed** to create all the electrical conductors that **provide the energy necessary for our homes, our cities and our industry**.

The whole De Angeli Prodotti product portfolio **supports the development and integration of Renewable Energy Electricity Networks** and is **the core of the new ultra-high efficiency motors in electric cars**.

Some products such as the **Carbon Fiber-core conductors**, used by De Angeli Prodotti to replace the traditional steel wire, are **ground-breaking due to their lightness and electrical potential**, while other products such as the **Transposed Copper Cables are similar to works of art**, combining the **technology of large 30-metre-high enamelling oven** with the meticulous, **almost handcrafted ability of specialised workers**.

At the heart of De Angeli Prodotti's organisational model are strong and well distributed fundamental values, **Safety as first priority**, the **creative involvement of the entire team** at all levels for **Continuous Improvement**, and a **Code of Conduct based on trust and proxy**, which increasingly encourages the generational transition to dynamic and qualified young people, who guarantee the company's future development.

De Angeli Prodotti is currently engaged in an **investment plan to support the growth of electric infrastructure and sustainable mobility**. In addition, a process is underway to **select and train 100 new workers and technicians** in order to increase production capacity and develop **new digitalised products for the electric Smart Grid of the future**.

Let's get to know each other better...



Afew years ago we published **Il Piccolo Libro della Nostra Cultura Aziendale** (The Little Book of Our Corporate Culture), which is a Culture Deck both in print and digital form that you can find on our website under "About Us", or at this link:

[https://www.deangeliprodotti.com/wp-content/uploads/2022/05/
DAP_PLDNCA_ENG.pdf](https://www.deangeliprodotti.com/wp-content/uploads/2022/05/DAP_PLDNCA_ENG.pdf)



DOWNLOAD THE PDF FORMAT!

"The Little Book of Our Corporate Culture" represents our **Digital Footprint, what we are** and what we aspire to be.

This book is a follow-up contribution to those thoughts that are fundamental to us, and also a **Visual insight** into how our founding principles find **concrete expression in corporate life**.

But **let's start from the beginning**.

Just to **put things in perspective**, we can recall that the strategic orientation and the current organisational set-up of De Angeli Prodotti stemmed from an in-depth discussion we had internally with our entire team **in 2007**. Those were the years of the Lehman Brothers great crisis, do you remember?

This crisis led to the **Strategic Change Agenda** (Figure 1), which is well represented in this amazing board, still exhibited and admired in our hallways today.

For those who do not know or do not remember it, the following figure represents our ambitious **Innovation Thesis** (Figure 2), which in other words could also be called as our Vision.

The Innovation Thesis provides the **3 basic points of our strategy** (Figure 3), in which **we have recently introduced a new important element** for our future, E-Mobility:

- **Most Innovative in the World for Overhead Lines!**
- **More and More High Technology Products for Windings!**
- **Efficiency and Service for Mass Market Products!**

OUR STRATEGIC CHANGE AGENDA

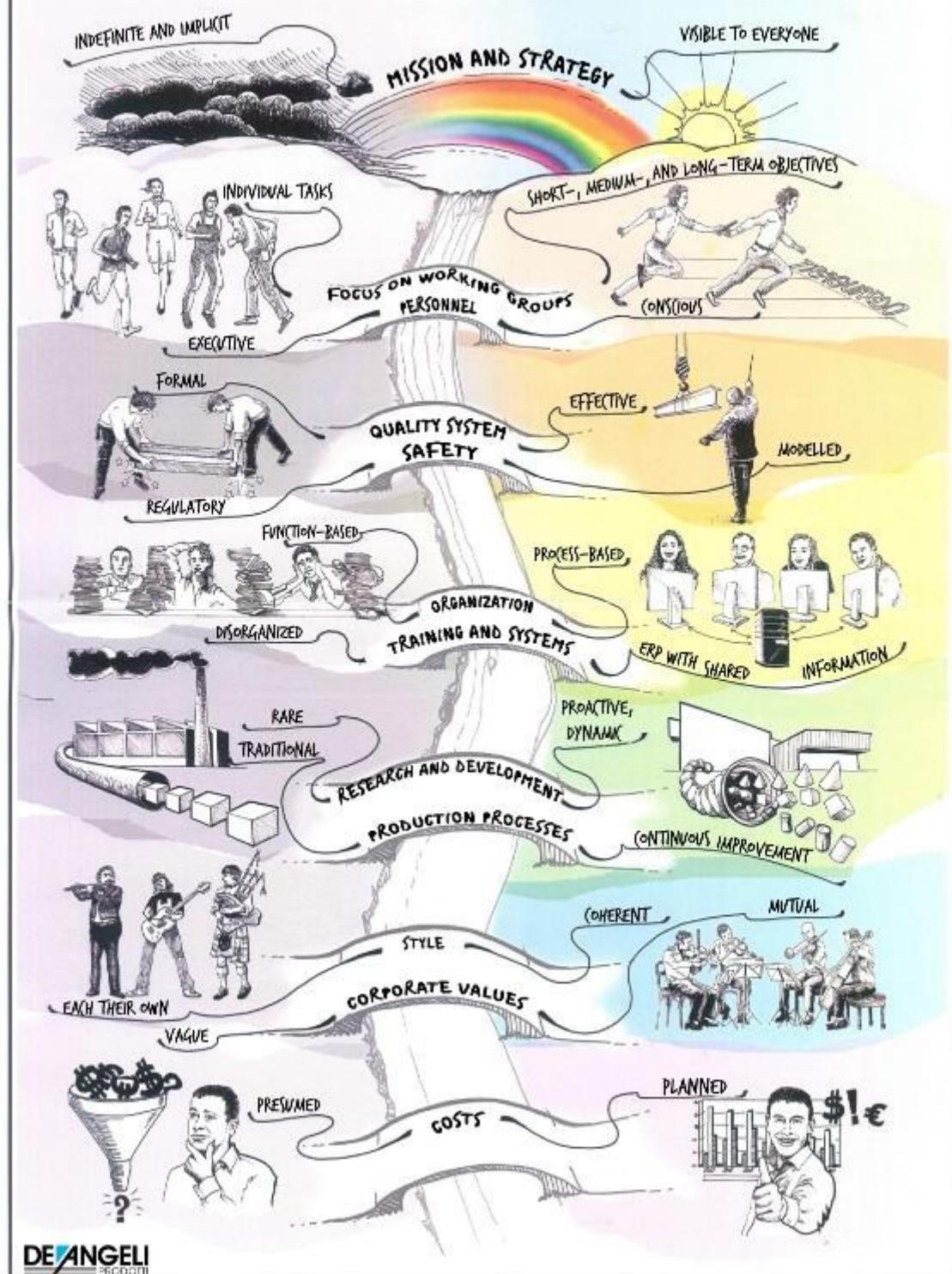


Figure 1: "Strategic Change Agenda" 2007

INNOVATION THESIS A VISION GUIDES US

De Angeli Prodotti is at the forefront of a **GREEN REVOLUTION** to save the Planet.

ENERGY TRANSITION helps **DECARBONIZATION**, requested **WORLDWIDE** to mitigate **CLIMATE CHANGE**, involves substantial investments in **RENEWABLE ENERGY**, and poses the challenge of **ELECTRIC MOBILITY**.

CONNECTION of **MULTIPLE INTERMITTENT ENERGY SOURCES** requires a **MORE INTEGRATED, SECURE** and **FLEXIBLE POWER GRID**.

DIGITALIZATION is an enabling and pervasive technology.

All above while in **DEVELOPING COUNTRIES**, a **GROWING SHARE OF POPULATION** has access to **ELECTRICITY**!

INNOVATION THESIS UNA VISIONE CI GUIDA

De Angeli Prodotti è protagonista della **RIVOLUZIONE VERDE** per salvare il Pianeta.

La **TRANSIZIONE ENERGETICA** favorisce la **DECARBONIZZAZIONE**, richiesta **WORLDWIDE** per rallentare il **CAMBIAMENTO CLIMATICO**, che comporta enormi investimenti nelle **ENERGIE RINNOVABILI**, e accende la sfida della **MOBILITÀ ELETTRICA**.

La **CONNESSIONE** di **MOLTEPLICI FONTI INTERMITTENTI** di produzione di **ENERGIA** richiede una **RETE ELETTRICA PIÙ MAGLIATA, SICURA e FLESSIBILE**.

La **DIGITALIZZAZIONE** è una tecnologia abilitante e pervasiva. Tutto accade mentre nei **PAESI IN VIA DI SVILUPPO**, nuove **GRANDI FASCE DI POPOLAZIONE** accedono per la prima volta all'**ENERGIA ELETTRICA**!



Figure 2: "Innovation thesis" 2019

OUR GOALS ARE CLEAR

Our team has always worked to achieve some goals.

- Ⓐ **Most Innovative in the World for Overhead Lines!**
- ⚡ **More and More High Technology Products for Windings!**
- gas **Efficiency and Service for Mass Market Products!**

I NOSTRI OBIETTIVI SONO CHIARI

La nostra squadra lavora da sempre per realizzare alcuni obiettivi.

- Ⓐ **I Più Innovativi al Mondo per i Conduttori di Trasmissione!**
- ⚡ **Sempre più Prodotti ad Alta Tecnologia per Avvolgimenti!**
- gas **Efficienza e Servizio per i Prodotti Standard!**



Figure 3: "The 3 basic points of our strategy" 2019

Since we have our ideas on the way we want to manage the company, we have defined **5 constituent values** (Figure 4-10), which remain firmly in the saddle and help us not to lose our way, in these times of powerful technological, economic transformation and geopolitics.

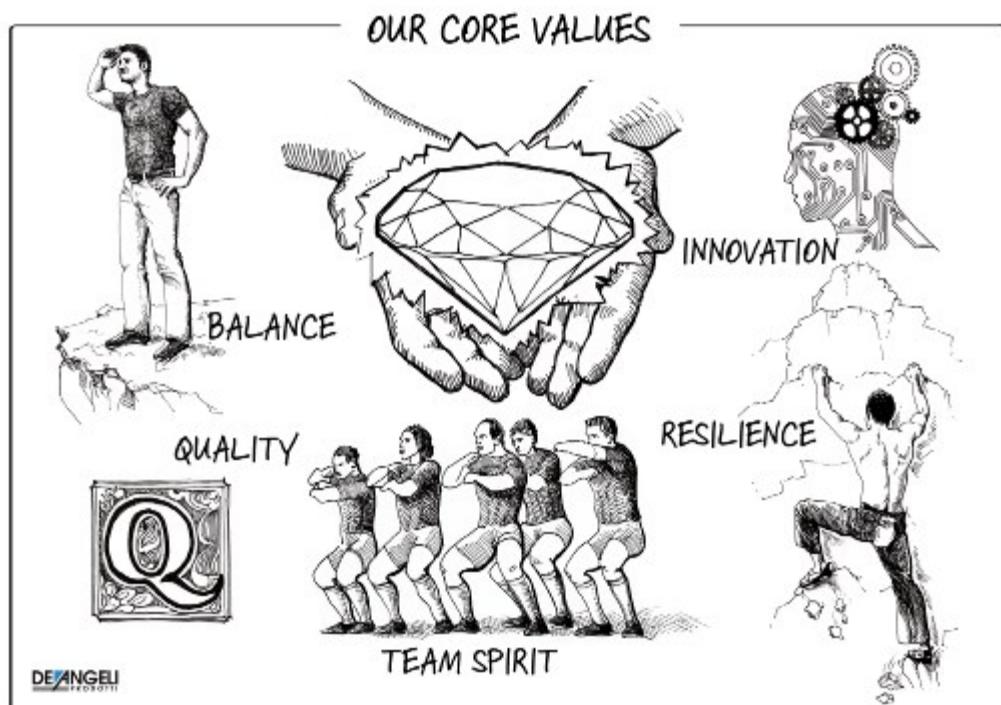


Figure 4: "Our value" 2007

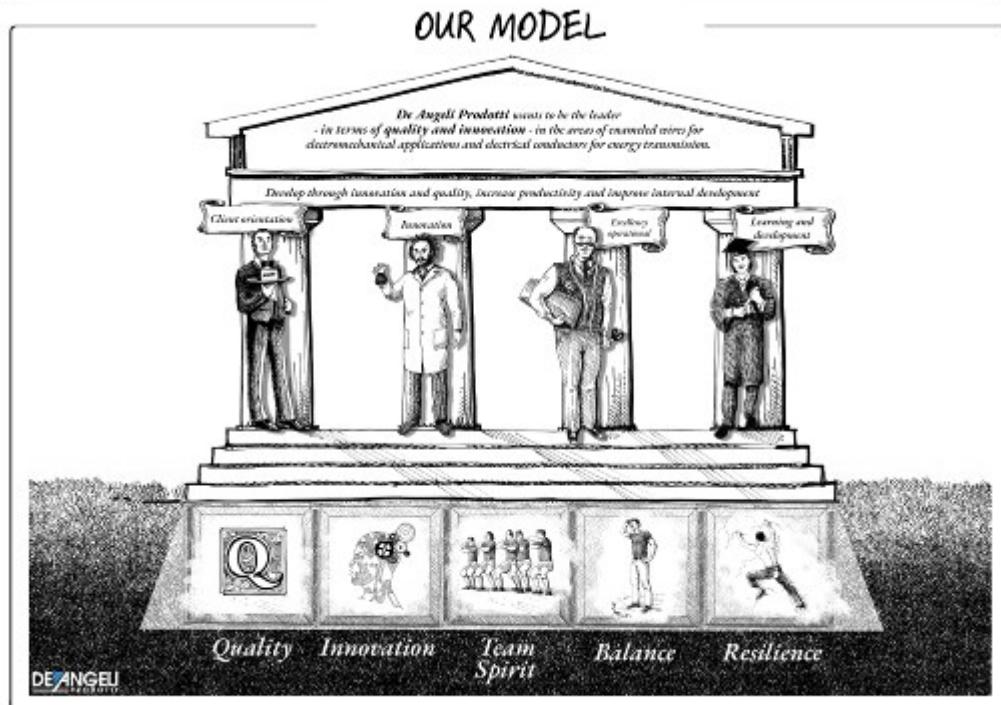


Figure 5: "Our model" 2007

QUALITY



Our **biggest mistake** is to try to awaken in each one's own **those qualities** that he does not possess, neglecting to **cultivate** those he has.

Marguerite Yourcenar

Don't stop at the symptoms but identify root causes asking yourself at least **5 whys**

Toyota

You understand **what needs to be done well now** and what you can improve later

The People

Build carefully quality **day by day**, on good days as in the bad ones, and you feel it **personally responsible**

Starred Chef

Make the concierge proud because you keep everything clean

Mop



You think about **good products** and solutions for **the customer**, not to big profits

Good Family Man

INNOVATION

A life without research
it is not worth living

Socrate

Challenge without
reverential fear the prevalent
technical and commercial
hirings

Maverick

Assemble and disassemble
large projects in small parts to
search for practical solutions

Lego Man

If you fall behind,
take a leap forward

Steve Jobs

Add day after day
value to the product

Master Geppetto

You work with the best

Steve Jobs

You don't want to leave
without leaving a trace

Elon Musk



Figure 7: "Innovation" 2022



TEAM SPIRIT

Zero tolerance for bullshit

Marchionne

Please contribute to **mixed working groups** outside from your specialization

Ajax '70

Share information openly in verbal form and written, in an articulated and concise way

Lutero

Fight bureaucracy and every rigidity, politics, mediocrity that infects organizations

Entrepreneur

Put your **trust** in others, you **delegate** a lot, you leave space to **young people** and encourage them

Coach

You are Always Open:
Open Space, Open Minded, Open Innovation, Open Doors

Pannella

Be an inspiration to others with your **great commitment** and **listening skills**

One of Us



Figure 8: "Team spirit" 2022

BALANCE



Festina lente

Augusto

You know you can make decisions wise even if you don't have all the information and the time you would like

Churchill

Take action by referring consciously to values of the company and for the achievement of the vision long term

Kaplan (Execution)

You are ready for action and **not you fall into the trap** analysis/paralysis

Clint Eastwood

Keep the business **simple, ultra-flat and concrete**

Kiss. Keep It Simple Stupid

Act without hesitation but with caution

Augusto

Just take the **smart risks**, avoid those fools

Mike Mc Dermott
not Lester "Worm" Murphy
(Rounders)



Figure 9: "Balance" 2022

RESILIENCE



When the sea is calm
they are all sailors

Proverb

You are tenacious: you
persevere days, months, years
without drop your arms

Alex Zanardi

You always show your face
Skin in the Game (Taleb)

Stay calm and clear-headed
in stressful situations
supporting those around you

Mr. Wolf (Pulp fiction)



DEANGELI
www.deangeli.it

Figure 10: "Resilience" 2022

A document describes our orientation well:



DECALOGUE OF ORGANIZATIONAL BEHAVIOUR

1. TRUST

Put **trust, trust, trust** in the whole team, from the youngest to the most experienced
"Man as an end and never just as a means" (Immanuel Kant)

2. DELEGATION

Because you trust, **incubate the intelligence of your colleagues** and
practice delegation wider to stimulate the initiative.
(3m's Boss William McKnight)

3. SELF-DISCIPLINE AND PERSEVERANCE

So much delegation requires **self-discipline**: train it!
Persevere days, months, years, decades with consistency.
"Persevering is human" (Pietro Trabucchi)

4. DOWN WITH BUREAUCRACY!

Despise and **fight bureaucracy** like arthrosis and don't get lost in stupid details.
"Zero tolerance for bullshit" (Marchionne)

5. CHALLENGE

Share with colleagues and savor the **TASTE OF THE CHALLENGE**:
Don't be afraid to make mistakes, think big and aim high.
"Big Hairy Audacious Goals" (Jim Collins - *Build to Last*)

6. COMMUNICATIOOOON!!!

Communicate to everyone at least **7 (seven/00) times**, transparently and to the point,
listen twice as long, then start again.
Anonymous Essay

7. MIXED Problem Solving GROUPS

Form **small, well-matched groups (A3)** without the need for unnecessary **hierarchy**
address the problems concretely.
"Getting the right things done" (Pascal Denis A3)

8. SIMPLE AND FLAT

Keep the company **simple, ultra-flat and concrete**.
Keep It Simple Stupid, Kiss (Kelly Johnson)

9. DO LIKE AUGUSTO...

Act without hesitation but with caution: **do - correct - adjust the shot**
"Festina lente" (Augusto)

10. THE MANAGEMENT OF THE FUTURE is not a dream

Passion 35% + Creativity 25% + Initiative 20% + Intellect 15% + Diligence 5%
+ **0% Obedience = 100% Value**
(Gary Hamel)

E AND FINALLY MEMENTO: WE LIVE FOR THE CUSTOMER!

The whole team works for the customer, but be careful:
in close contact with the **technical side of the customer**.

every wire, everywhere.



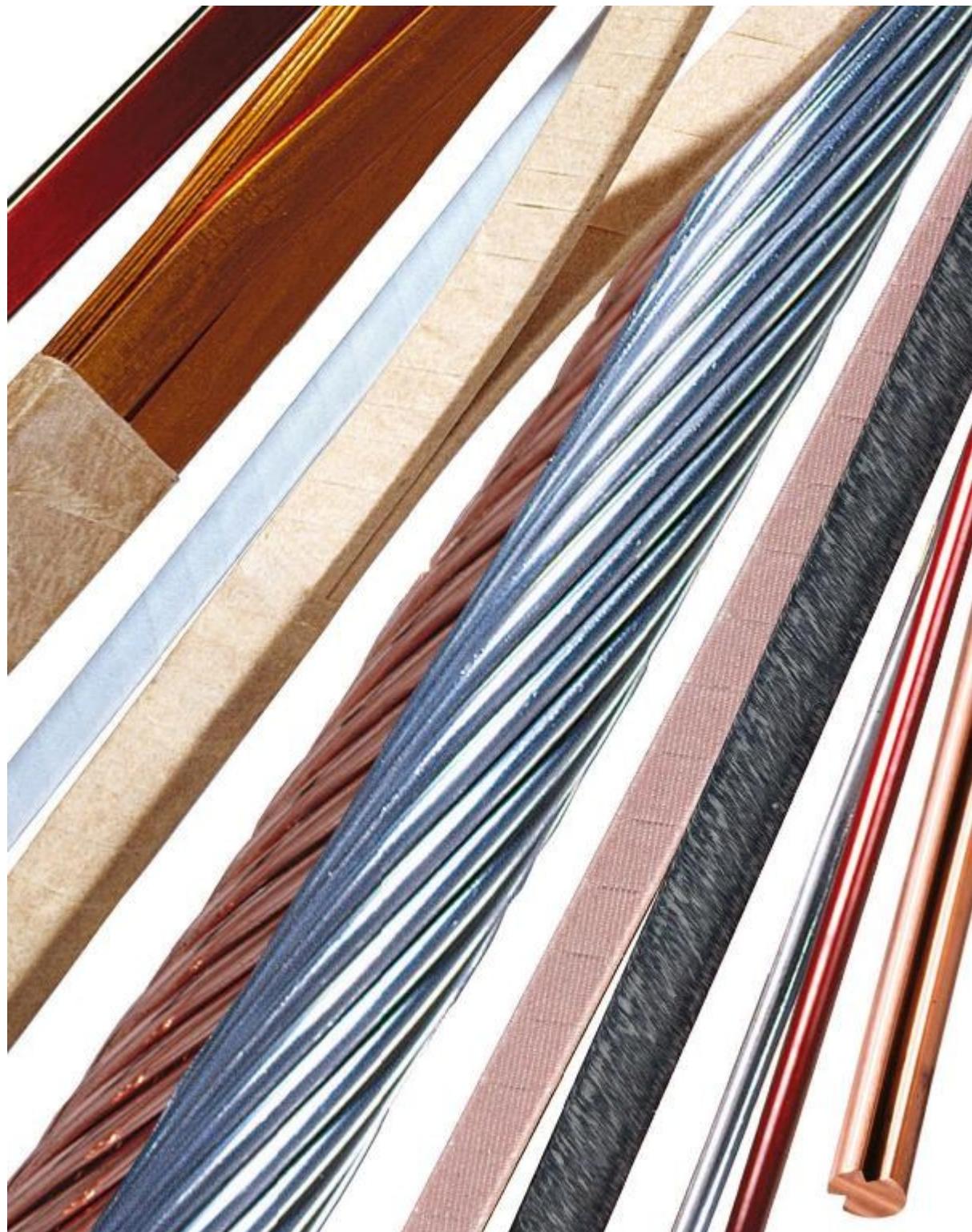
www.deangeliprodotti.com



In this quick overview we finally take a look at the **products we produce** based on all the strategic and organisational considerations we have already described.

No other manufacturer on the market has such a wide and High-tech product range for power transmission conductors (Figure 12 "Take Your Choice").

In our catalogue we have all the wires for every electrical machine, from the very simple to the most complex (Figure 13 "Choose Your Wire").



STANDARD PHASE CONDUCTOR
FOR POWER LINES AND RAILWAYS



OPPC

AAAC-SHC

Low losses

GROUND WIRE

OPGW

ACS

ACSS

INVAR CORE

HTLS CONDUCTOR

HTLS

SPECIAL HTLS CONDUCTOR

ACCS

ACCS-SENS

For monitored installation

Smart Conductor
For distributed power lines monitoring system

Wire Shapes

TW

ROUND

TRAPEZ.

RW

ZW

ROUND

Z

Customized Shape

Anti-Ice Coated

1.000 km

ACCM

Aluminum Conductor Composite Multistrand

3.000 km

ACCS-SENS

For monitored installation

1.000 km

ACCS

Aluminum Conductor Composite Single

12.000 km

HTLS

HTLS CONDUCTOR

HTLS

HTLS CONDUCTOR

HTLS

HTLS CONDUCTOR

HTLS

Figure 12: "Take Your Choice" 2020

CHOOSE YOUR WIRE

ELECTRIC MOTORS		TRANSFORMERS POWER - DISTRIBUTION		LARGE MOTORS AND GENERATORS		SPECIAL COATINGS SPECIAL INSULATION SYSTEMS		LITZ WIRES AUTOMOTIVE - POWERTRAIN	
THERVEST	H(180°C)	SOLVEST	F(155°C)	MICA	GLASS FIBRE	POLYIMIDE - KAPTON®	ADHEXAL	LITZ WIRES	
PUMPS DRIVES INDUSTRIAL	200 220 L _{long} L ₀	SOLDERABLE COPPER WIRES	HS(180°C)				H(180°C)	AUTOMOTIVE - POWERTRAIN	
CONTINUOUSLY TRANPOSED CABLE		WRAPPED CONDUCTORS		MULTIPLE WIRES		WRAPPED CONDUCTORS		LITZ WIRES	
HIGH PERFORMANCE COPPER WIRES		STANDARD & SPECIAL PAPER UP TO 16 STRANDS LOW THICKNESS ENAMEL MICRO-STRIPS RADIAL BONDING PAPERLESS		RADIAL & AXIAL COUPLING MULTIPLE CTC SPECIAL CONFIG. FOR SHELL-TYPE WINDINGS DIAMOND - DOTTED TAPES		STANDARD & SPECIAL PAPER HIGH PERFORMANCE TAPES ENAMEL COATING DIAMOND-DOTTED TAPES		UP TO 630 mm ² STD & CREPE PAPER	

E-MOBILITY
AUTOMOTIVE
POWERTRAIN

**HIGH
FREQUENCY**

Figure 13: "Choose Your Wire" 2020

Finally, the stunning flat insulated E-Mobility wires (Figure 14).

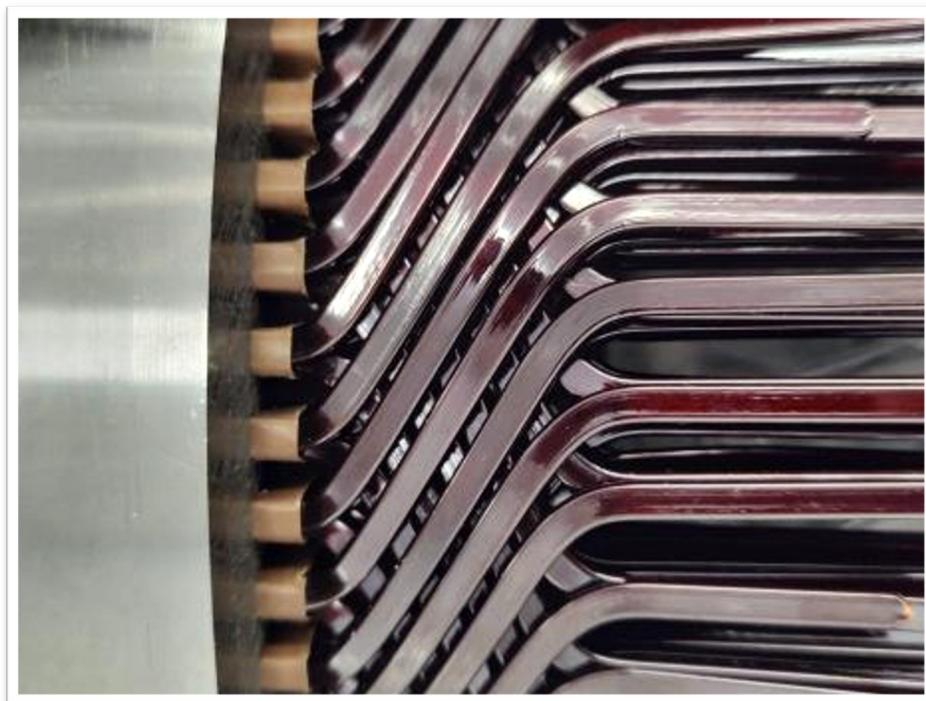


Figure 14: Close-up of a hairpin stator with De Angeli Prodotti flat wires

This is enough as a first taste: through the newsletters and new explanations before the end of the book, we will get to know each other better!

**First of all... Who
leads the way in
De Angeli Prodotti?**



**WHO LEADS THE WAY IN
DE ANGELI PRODOTTI?**

THE RESPONSIBLE PERSON ...

Motivated

Disciplined

Determined

**Support colleagues
and sets an example**

**Does not run away
from problems and deals
with them**

**Keeps calm
in difficult moments**



DE ANGELI
PRODOTTI
Quality with, everywhere.

WHICH MENTORS POINT HIM IN THE DIRECTION?

... FOLLOWS SENECA & MARCO AURELIO

- **Avoid rushed reactions**
- Remember the **transcience of things**
- Choose **goals we can control**
- **Be virtuous**
- Take a moment and **breathe deeply**
- **Put problems into perspective**
- **Speak little and well**
- Choose **your companies** wisely
- Respond to insults **with humor**
- Don't talk too much **about yourself**
- **Speak without judging**
- **Reflect** on the day just gone by

"How to be stoic"
(M. Pigliucci)



Let's take a tour of
the departments!

Discovering the
beating heart of
the company



Different departments with a common purpose: encouraging the energy transition

Now that we have discovered the philosophy that drives us, let's explore our **production departments**: the heartbeat of innovation.

De Angeli Prodotti is composed of several production departments, each dedicated to a specific stage of the production process, contributing to innovation and excellence in every single detail.

- **Stranding:** The place where overhead conductors for the transmission of electrical energy come to life, a crucial department that guides progress in electrical conduction.
- **Enamelling:** Centre for the production of wires and flat wires isolated with innovative enamels for industrial, energy and automotive applications, embracing safety and reliability.
- **CTC or Transposed Cable:** It is dedicated to the production of wires made up of several enamel flat wires for power transformers, a key element in the transmission and distribution of energy.
- **Litz:** The department that makes the wires for electric car charging stations, which contributes to the evolution of e-mobility.
- **Drawing:** The core of production, it processes copper and aluminium to supply semifinished products to other production departments.
- **Wrapping:** One of the final links of the process, where wires are isolated with advanced electrical and mechanical properties paper, meeting the most stringent market needs.

Ready for a trip through images?

Along with this introduction, we invite you to visually explore our world through a series of photos that capture the vitality and advanced technology of our production departments. Each image tells a story of commitment, innovation and quality that are the pillars on which De Angeli Prodotti is founded.





DE
ANGELI

INDUSTRIAL

WIRE

AND

ROPE

MANUFACTURERS

OF

THE



DE



ANGELI

INDUSTRIE

MANUFACTURER

OF COPPER

WIRE

AND CABLES

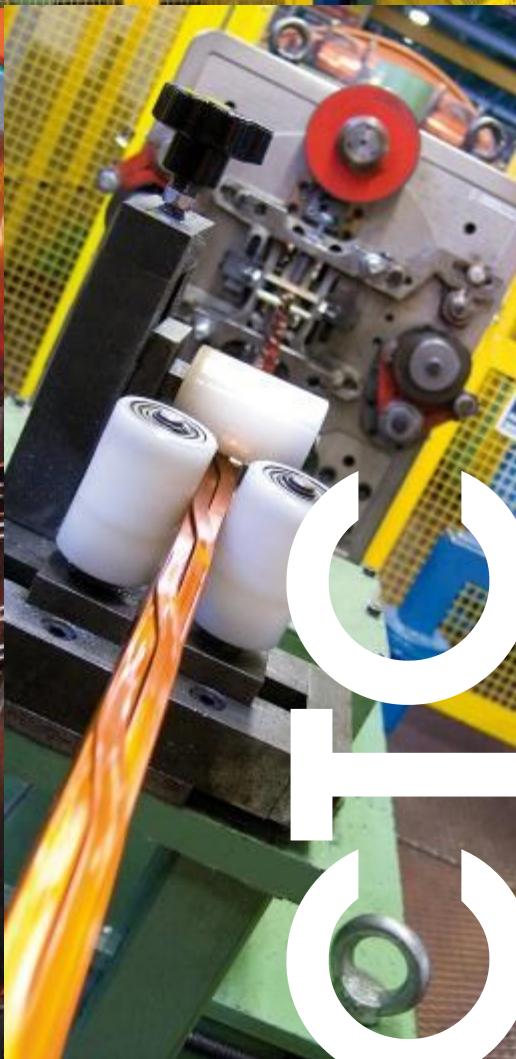
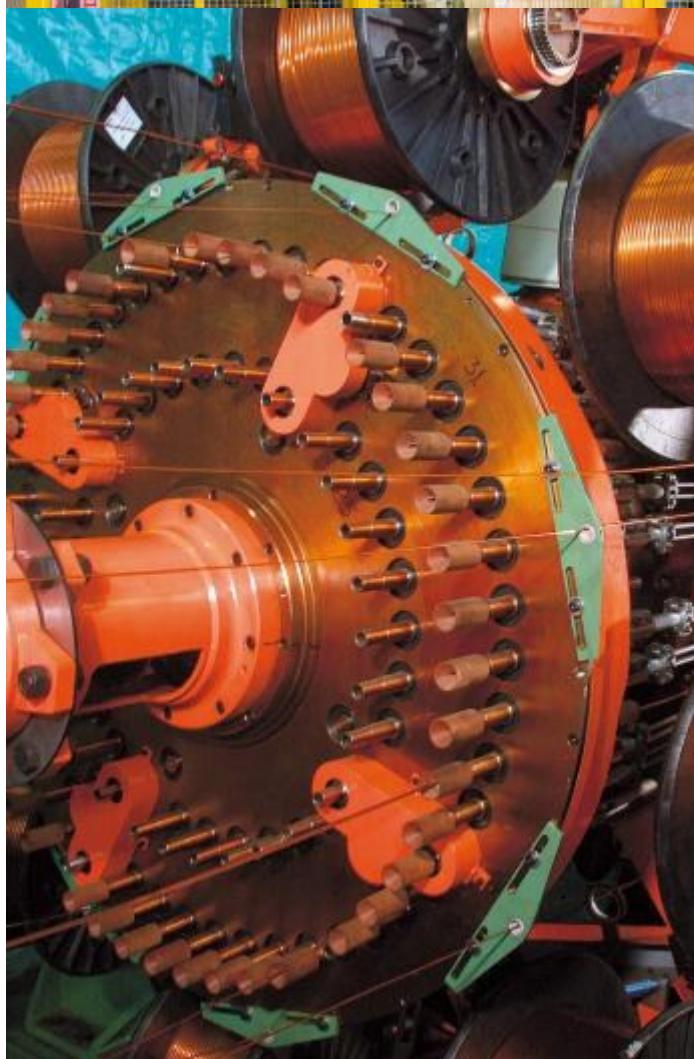
FOR THE

INDUSTRY

AND AUTOMOTIVE

SECTORS

DE ANGELI



WRAP





LABORATORY





PO
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W

**The latest history of
our company,
collected in the
Newsletter**



Since 2016 a voice that tells the life story at De Angeli Prodotti

Welcome to the heart of this writing, represented by the De Angeli Prodotti Newsletter, a thrilling journey into the **beating heart of our company**.

The tradition of sharing stories and successes through the Newsletter has deep roots here, dating back to as far as 2011, when the first De Angeli Prodotti Newsletter saw the light of day as a full-bodied **magazine**, filled with pages recounting the **challenges, triumphs, and daily life** in our company.

Over the years, we have moulded this tradition into a more flexible and modern format, embracing the speed of email inboxes and the convenience of holding it in the hands of all our employees. **Since 2016, our newsletter has evolved**, becoming a direct bridge between what happens inside and outside the company, a powerful medium for growing a sense of belonging and sharing know-how on projects, achievements and milestones.

This is our way of opening the doors of De Angeli Prodotti to all of you, of making you feel an integral part of every success and challenge we face. Each month, this window into our reality will bring you closer to who we are and who we want to become. We are proud of this form of effective communication, a common thread that binds us and guides us on our journey of growth.

Thank you for being with us on this **trip**, made up of stories, growth and a constant commitment to the future.



2016

The year of the antitheft wire for Italian Railways

Anti-theft wire solutions: no copper inside!

De Angeli Prodotti's product range is gaining increasing success in the world of the antitheft market. We are constantly looking for creative, cutting-edge solutions to prevent copper theft.

This topic is so important for Italian economy that last week a new law aimed at increasing penalties for copper theft was discussed.

Whoever takes possession of metal components or other material belonging to infrastructures designed for the supply of energy, transport services, telecommunications or other public services and managed by public entities or by private persons under public concession shall be punished by imprisonment from one year to six years and a fine ranging from €1,000 to €5,000 - Source: www.miogale.it (Art. 624-ter "Theft to the detriment of energy and communication infrastructures.")

A new solution for overhead and ground lines was recently adopted for the Italian Railways network, thanks to which **hundreds of kilometres of De Angeli Prodotti's anti-theft conductor have already been installed**.

The new products are having an important feedback at European level, which proves De Angeli Prodotti's ability to propose "tailor-made" solutions to its customers.



READ THE NEWS ON OUR
WEBSITE
SCAN THE QR CODE!



MAY, 2016

Launch of the new NEWSLETTER!

This is the first issue of a new internal newsletter that was created to communicate the most interesting news about the company, and allow everyone **to participate** in the many initiatives underway, being **proud** to belong to a dynamic and innovative organisation.

Everyone knows that the race for survival is very tough in the globalised competitive world in which we operate, and therefore the corporate team needs to play compact, aware and motivated according to our common values: **innovation, quality, team spirit, balance and resilience**.

Since there are many challenges and we need everyone's support to succeed, we are launching the new **IDEAngeli** plan with this issue: if you have any good ideas for improvement, please submit them in the format below.

The best ideas will be selected, realised and rewarded, so you can have the pleasure of seeing your creativity take shape and directly benefit from it!

“

*Creativity is contagious.
Impart it.*

Albert Einstein

JUNE, 2016

Let's reward the first ideas!

The *IDEAngeli* project launched in May took off immediately, so we can start rewarding your ideas!

More than 30 proposals were collected from all departments and our Project Manager Mr Davide Peroni analysed and discussed them with colleagues, and finally selected the top two to be implemented and awarded. Thanks to everyone who has joined this project because in this way they **contribute as protagonists to the continuous improvement** indispensable for us all to face the challenges of the market. Those who did not win in this first round should not despair because **in the coming months other ideas will continue to be rewarded, and those who want to have a better chance should come forward with new suggestions**: please make sure they are concrete and feasible! Finally, in order to make our project more stimulating, we have decided **to draw a prize of 1,000 EUR at the end of the year among all the ideas submitted and considered valid by Mr Peroni**, no matter whether they have received the monthly prize or whether they have not yet been followed up. We count on your intellect and problem-solving skills: unleash your creativity!

“

Ideas often ignite each other like electric sparks.

Friedrich Engels

JULY, 2016

The IDEAngeli project continues with new brilliant ideas!

The newsletter has picked up a good pace and every month gives us the opportunity to share the most interesting news. In this issue we focus on safety training for everyone, to ensure that no one gets hurt, on the scheduled maintenance system introduced to take care of the efficiency of our systems, and on the commercial activities underway to strengthen our presence on the market and acquire new customers. The IDEAngeli project, for its part, is going swimmingly and more and more ideas are being proposed by many colleagues to improve our processes. This month, **47 proposals were submitted from almost all departments**, and our project manager Davide Peroni selected two of them to be awarded. In the meantime, the ideas awarded last month are being implemented and the results will soon be seen. Even the ideas that do not receive the monthly prize, but which are considered valid by Mr Peroni, regardless of whether they are realised or not, **will participate in the draw at the end of the year for a prize of 1,000 EUR!** Therefore I thank again those who have already proposed some ideas and I urge everyone to come forward with new ones!

“

All ideas that have enormous consequences are always simple ideas.

Lev Tolstoj

SEPTEMBER, 2016

New ideas are always blooming!

After the August break, the newsletter get back in the game to share with us some important events regarding our company. In this edition we talk about the concrete improvements that have been implemented following the proposals of our **IDEAngeli** program, the participation in the Coiltech fair in Pordenone (an opportunity to present our new products to the market) and the success that our donation has achieved at the Bagnoli nursery: beautiful swings to make the children grow up happily and in harmony with each other!

With great satisfaction I confirm that the **IDEAngeli** project continues to regularly churn out **new ideas for improvement from** many colleagues from **all** (this time all!) **departments and services**.

This month, **36 new proposals** were put forward and Project Manager Mr Davide Peroni selected two winners. I thank all my colleagues who participate with intellect and enthusiasm in this program: anyone who wants to rack their brains should come forward!

“

The best ideas belong to everyone.

Seneca

OCTOBER, 2016

“Innovation” is our motto!

Iso this month there is no lack of topics for our newsletter.

A We are proud to announce the **acquisition of all the machinery of the company Ezio Selva**, a historical and prestigious brand in the coil conductor sector, which recently closed down as a result of the crisis affecting our industry. The equipment will be installed gradually over the coming months in our factory, and will help us to improve customer service and offer new products to the market.

In order to **improve communication and collaboration between all colleagues**, we would like to congratulate the newly created **WeDAP**, our brand new intranet that will allow us to manage projects and work groups in a more modern way.

“

*Be less curious about people
and more curious about ideas.*

Marie Curie

NOVEMBER, 2016

Who will win the final prize?

Newsletter full of news this November!

We extend the **continuous training of our employees** and **we learn how to do internal audits on our production processes to improve them** with everyone's help. Andrea Gian, Maristella Vianello and Pietro Borella went to our customer Končar Siemens to improve packaging management together, and found out that Mr. Marijan Ivanis is retiring: best wishes! **On 22nd December at shift change, between 13:30 and 14:30, there will be a draw for the end-of-year prize of 1,000 EUR** from all the ideas submitted and selected by Mr Peroni. Considering the success of the initiative, **we have decided that a second and third prize of 500 EUR and 300 EUR will also be drawn!** Everyone is invited to the award ceremony, there will be some panettone, some drinks, and we will wish each other a happy and fruitful 2017: please come numerous because we need a strong team to face the challenges of the markets together.

“

The value of an idea lies in putting it into practice

Thomas Edison

DECEMBER, 2016

Best wishes!

We have reached the December newsletter, which culminates a year lived in the name of our common values: **innovation, quality, team spirit, balance and resilience**. Two important new goals have been achieved in recent weeks

- the **training of all colleagues to work safely**, with a commitment of 4000 hours of lessons dedicated to ensuring that no one gets hurt;
- the **creation of our proprietary conductor with a carbon fibre core, the most advanced in the world** for power transmission over overhead lines.

Our IDEAngeli programme has reached the final award ceremony: **on 22nd December, the three prizes of EUR 1,000, EUR 500 and EUR 300 will be drawn** from all those who proposed the 86 best ideas selected by Mr Peroni.

During these months, **the most creative and enterprising colleagues have marked out the path for the future**, formulating concrete improvement proposals that have already been partly implemented to their satisfaction, and that **can be an incentive to extend the passion for improvement and innovation even further throughout the company**.

When we meet at the awards ceremony, it will be an opportunity to wish each other well, enjoy a little refreshment, and close ranks to face 2017 with the right attitude.

“

The idea is also nurture

Victor Hugo

2017

The year of giant CTCs and high performance conductors

A new 87-flat CTC production line

The second most important point in De Angeli Prodotti's strategy is "to constantly increase the share of high-tech coil products".

In line with this strategy, De Angeli Prodotti has set up a **new CTC production line with 87 flat wires** up to **0.8 mm** thin, which can make use of the semi-finished products manufactured on **two new rolling mills** and **six new high-output enamelling lines**.



In this way, the **range of CTC** offered to our customers is **extended** and **delivery times and quality assurance are further improved**.



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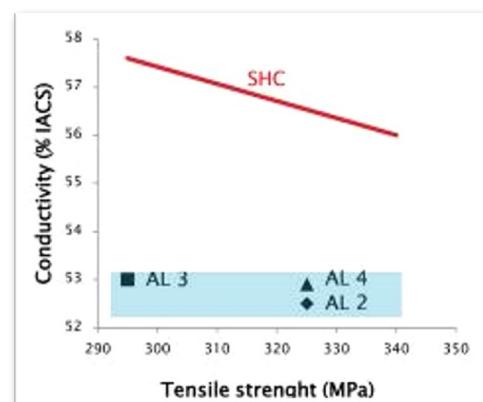
All Aluminium Alloy Conductor – Super High Conductivity (AAAC-SHC)

Low line losses, easy installation and replacement, less CO2 production: all this is **AAAC-SHC**.

Aluminium alloy has long been used as a material for overhead power lines, but today's technologies allow a significant improvement in electrical properties compared to traditional conductors. In particular, one of the ways to achieve efficient, lightweight conductors with high corrosion resistance and low line losses is to improve the electrical conductivity of aluminium alloys.

Today, the **AAAC SHC conductor is at the forefront of technology** for overhead power lines in terms of energy efficiency.

An accurate study of the properties and microstructure of aluminium alloys allowed the development of a material with higher electrical conductivity than those conventionally used for the construction of all-aluminium alloy (AAAC) conductors, while maintaining the same mechanical properties.



Comparison between traditional alloys (represented within the blue area) and SHC alloys

The improvement in electrical conductivity allows a reduction in energy losses of more than 7%.

Minimum wire breaking strength (MPa)	Maximum wire resistance (Ohm.mm ² /m)	
ASTER 570AL 4	325	0.0329
ASTER 570SHC	325	0.0305
Delta	=	-7.3%

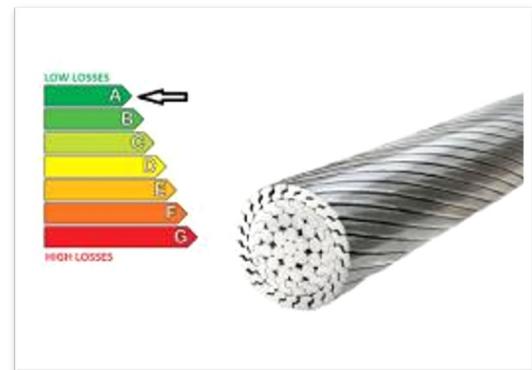
ASTER 570 AL 4 and ASTER 570 SHC compared

In addition, the innovative product developed by De Angeli Prodotti and TCH De Angeli gives the possibility to achieve extremely high conductivity for various levels of mechanical strength, which makes it possible to meet the most varied customer requirements. Here are the main advantages:

- **Lower line losses:** this aluminium alloy with higher electrical conductivity allows a loss reduction of up to 7% compared to traditional AAAC conductors of the same size and weight;
- **Easy installation and replacement:** the AAAC SHC conductor has the same cross-section as the traditional AAAC conductor, which allows old lines to be replaced without any problems. In fact, the new conductor can be installed in exactly the same way.

Less power generated upstream and therefore less CO2 production: less line losses mean less power generated and therefore less carbon dioxide produced to serve the same load.

Less power generated upstream and therefore less CO2 production: lower line losses mean less power generated and therefore less carbon dioxide produced to serve the same load.



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JANUARY, 2017

2017 begins with great strategic initiatives

We start the new year with the best of intentions to continue the implementation of our strategic initiatives with the active support of everyone.

At the top of our strategy we have placed:

"To be the most innovative overhead conductor manufacturer in the world".

and you will understand that only a good, strong and cohesive team can realise such a **globally** important goal! In this issue of the newsletter we present some important news:

- the **launch of our "Visual"** project, with which we want to encourage the development of simple and intuitive organisational solutions that help people work well and safely;
- the **IDEAngeli 2016 award ceremony**, which was an important opportunity to thank all colleagues who contributed with their ideas to improve our company.

“

Many heads, many ideas

Proverb

FEBRUARY, 2017

Innovation, training and collaboration: towards a 4.0 industry

It is with great satisfaction that I highlight the realization of 3 ideas by IDEAngeli in the Transposed Wire and Stranding departments, which allow us to improve productivity, work more easily and reduce wear on components. Another major improvement project is upon us and we have called it **DAP 4.0**, in harmony with the new production philosophy commonly called Industry 4.0, and represents a unique opportunity for our organization to integrate systems and process information in an always more immediate and direct, facilitating the work of operators and increasing the service we can offer to our customers: for this reason we created a **PLC programming course** which involved several colleagues.

Some of you may have come into contact with our French colleague **Julie Prieur**, who spent a training period here with us: it is a small step to encourage the internationalization of our company through the strengthening of our French branch TCH De Angeli.

“

The fewer ideas you have, the less you are willing to change them

Michelangelo

MARCH, 2017

A series of positive results

In this issue we deal with some current issues in very different fields.

We pay attention to the **ENEL audit** (our historic client) which gave a **positive result**. In short, there is a lot of activity in the company and this is an incentive for us to set ourselves new important goals.

A optimism sign is also the **new hiring of several young people** (we are looking for them with an extra gear!) to help our company grow.

“

Where a fact thunders, an idea flashes

Ippolito Nievo

APRIL, 2017

We invest in research to meet customer needs!

Anew newsletter sees the light and announces interesting prospects for our company.

With great pleasure we welcome two new engineers who strengthen our fierce Technical Office team, dedicated to the design of new products and processes and to Research and Development.

Marco is an engineer who completed his PhD, hired thanks to a competition with an auspicious name: **PhD ITalents!** **Debora**, on the other hand, did her degree thesis here with us and given her talent we proposed that she stay.

We then raise the curtain on Terna's investment programs in the Italian electricity grid, which as you know is one of our main customers. The plan is robust in the coming years and it will be up to us to be competitive and innovative to do our part by outpacing the competition.

Finally, let's talk about the technical round table we held with our important customer **Siemens Trento**: it is from these discussions that the best ideas for developing new products and services for customers arise.

“

No one without invention was ever a great man in his profession.

Niccolò Machiavelli

MAY, 2017

Quality and continuous improvement: we can do it!

This issue of our newsletter is dedicated to the **continuous improvement** we are capable of in our company. For many years now we have mobilised many resources (people, training, Research and Development, Lean organisation, new investments, huge capital) to be able to have a cutting-edge service for our customers. It is inspiring to see that this common commitment produces **results we can be proud of**.

If we inspect our systems regularly with the **TPM**, then we see that they fail less and produce quality.

By improving with rationality and energy in all the departments that contribute to producing transposed wires (CTC), we can then measure the progress in our productivity and quality indicators.

“

There's no point in closing the doors to ideas: they bypass them.

Klemens Von Metternich

JUNE, 2017

Clean inside (the canteens) and beautiful outside (in Berlin)!

In this issue of the Newsletter we cover some very different topics, but all important for our community and our customers.

Embracing the theme of continuous improvement in every field, we began to create a plan for the **arrangement and cleaning of work and social areas**.

The pilot project is the Yellow Canteen, which has undergone a complete tidying up and sanitisation intervention, which will be followed by other projects in the other canteens, services and common areas.

In the production field, the creation of the IDEAngeli proposed by various colleagues is proceeding rapidly, as demonstrated by containers, taps and cameras installed in Drawing Dept and Stranding Dept.

The company was also among the most innovative at the **CWIEME fair in Berlin**, creating the basis for new development opportunities together with historic customers and new interesting contacts.

“

I prefer ideas to ideals.

John Lennon

JULY, 2017

New signage, a video tutorial, and super news!

The July newsletter brings many updates, displaying the creativity and initiative of our great team. Previously, someone could get lost in De Angeli Prodotti given the labyrinthine expanse of our yards and warehouses. However, since **Nicola Lazzaro designed the new signage** and our maintenance team installed it, **everyone arrives at the right place. And with a certain style.**

Next, we introduce the realisation of the **first video dedicated to optimizing machine setup activities**. In collaboration with capable operators, we have clearly and precisely defined the correct process on the **DEM mill**. When it comes time for training, we'll have a **modern and effective tool at our disposal**. We take pride in this achievement; once we've developed an entire video library, we will be unbeatable.

Finally, **Power Rider** takes off, the **first superhero of the A3X-Men team**, embodying one of our major strategic objectives: **"To be the most innovative producers of overhead conductors in the world!"**. He is the imaginative spokesperson for our significant commitment to developing technologies such as **Invar, Carbon, Kevlar, nano particles...**

“

The ability to turn ideas into things is the secret of success

Henry Ward Beecher

A3X-MEN

THE LEAN THINKING SUPERHEROES

THE MOST INNOVATIVE IN THE
WORLD FOR OVERHEAD LINES!



POWER
RIDER

SEPTEMBER, 2017

An internal change that is visible from the outside

The spirit of continuous improvement has now taken possession of our great team, and in every newsletter, there are new initiatives to be proud of. Small things that, together, contribute to making our company a better place for those of us who work here and an increasingly reliable partner for our customers. This time, we have undertaken some improvements to our image, starting a restyling journey to challenge some small signs of aging (we're no longer 20!), instilling a new impetus for perfectionism even in the aesthetic aspect of our powerful mechanical DNA.

As workplaces are also external representations of who we really are, we have also torn down two more walls to create new open spaces and better foster collaboration among different company functions. The idea is that if physical walls collapse, so do the immaterial ones that we might have in our minds! The new brilliant superhero, Professor Tekno Nerd, from the A3X-Men team, has also ignited the retro-rockets. He embodies the important strategic goal: "Increase the share of high-tech products for windings".

“

Adapt the technique to the idea, not the idea to the technique

Bill Bernbach

A3X-MEN

THE LEAN THINKING SUPERHEROES

TEKNO
NERD

MORE AND MORE TECHNOLOGY
PRODUCTS FOR WINDINGS

OCTOBER, 2017

Creativity and sharing... soaring towards excellence!

Over time, our company has brought to life many modern and innovative energy transmission conductors: with low expansion coefficients, silent, invisible, lightweight, reducing electrical losses, even anti-theft since copper is selling like hotcakes.

At a certain point, we realized that the market lagged behind all these new possibilities. Then, we thought it necessary to promote co-design with potential customers and engineering companies. **MEET-ing is an event that embodies this idea** and is just one of a thousand new initiatives to create new markets for our innovations.

If you don't believe how creative we are, **take a look at the Best Paths video: you'll find some familiar faces there...**

Beating the brutal global competition in mass-produced products like enameled wire, taped flat wires, ACSR conductors is a superhuman challenge. That's why the heroine **Flying Smile** was born: **not taking herself too seriously, she is damn serious!**

“

Evolution teaches us that the universe has never stopped being creative or inventive

Karl Popper

A3X-MEN

THE LEAN THINKING SUPERHEROES



FLYING
SMILE

EFFICIENCY AND SERVICE FOR
MASS MARKET PRODUCTS!

NOVEMBER, 2017

A glimpse into the future with DAP 4.0

This newsletter devotes a lot of **space to our commercial activities and organizational innovations**.

On the commercial front, we are expanding our horizons beyond Europe, seeking markets that can appreciate the quality of our products and our innovative capacity.

On the organizational front, the newsletter is dedicated to **presenting our major digitization project, DAP 4.0**.

It is important that we share and give it the right emphasis **to unleash the intelligence and energy of everyone**, creatively **combining technical skills with digital possibilities** and the **human value of all the wonderful people** working in our company.

Finally, **IDEAngeli continues its journey** to create an **unbeatable team of Problem Solvers!** Our **LEAN philosophy** places **every person of the team at the center** of the company, and with their restless **yearning for continuous improvement**, stemming from a **centuries-old tradition** of precision manufacturing, contributes to **meeting the increasingly challenging demands of customers worldwide**. **IDEAngeli** offers everyone the opportunity **to unleash their individual creativity** and rewards them for showcasing **extraordinary problem-solving intelligence**, which is the secret ingredient **for facing the future with optimism**.

“

Nothing is more important than being able to observe the sources of invention, which are, in my opinion, more interesting than the inventions themselves.

Gottfried Wilhelm Leibniz

DECEMBER, 2017

Happy Holidays!

We have reached December, and it's time to take stock of the past year and set some goals for the new year.

The competition in the market is increasingly intense and global, but we rely on our deepest company values:

Innovation – Quality – Team Spirit – Balance – Resilience

to achieve our ambitious mission:

"To be a leader in terms of quality and innovation in the production of conductors for electrical windings and energy transmission."

In 2017, we have taken many steps forward on this path of continuous improvement: we have developed **new products**, introduced increasingly **modern organizational models**, invested in the **training of the many talents** working in our team!

On December 21st, three prizes of 1,000 EUR, 500 EUR, and 300 EUR will be drawn among all those who have proposed the ideas selected by Mr Peroni, recently joined (given the success of the project) by Mr Tita.

See you at 1:30 pm at CTC (in front of line 4) for the award ceremony, to share new projects for the next year, enjoy a small refreshment, and exchange wishes for a Merry Christmas and a happy 2018!

“

The best way to predict the future is to create it

Peter Drucker

2018

The year of large alloy conductors and special treatments to mitigate problems related to ice loads

Anti-ice conductors

De Angeli Prodotti has developed, in collaboration with one of its partners, a new superhydrophobic surface treatment. In our facility, a new production line utilizes the best technologies available in the market, combined with a well-tested process to ensure customer satisfaction.



The formation of ice on conductors is a problem that affects overhead power lines in various countries worldwide. Since this phenomenon can lead to very serious consequences, including, in the worst cases, the breakage of the line, the study of a solution is really important.

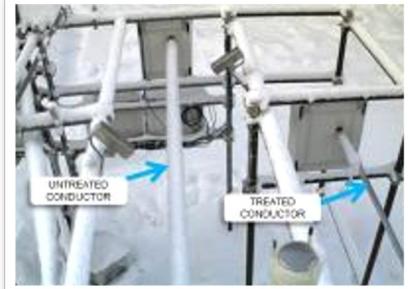
De Angeli Prodotti accepted the challenge and studied various possible solutions to **reduce the ice load on conductors**. This can be done in two different ways: delaying the formation of ice on the conductor or facilitating its fall. De Angeli Prodotti considered two different approaches: one focuses on the geometry of the conductor, and the other on its surface. The most promising solution is based on a specific treatment that allows achieving a **superhydrophobic surface**. After years of research, a special coating was developed, and a new production line was installed in the factory.

The first solution developed by De Angeli Prodotti was based on **a particular geometry of the conductor**, studying the layers to achieve a total torque equal to zero.

With the aim of obtaining an even more efficient and versatile solution, De Angeli Prodotti, together with a significant partner, has developed an anti-ice coating based on the deposition of a thin layer of paint through UV technology. The result is an **eco-friendly process** that can be applied to all types of conductors.



De Angeli Prodotti has developed an innovative geometry and surface treatment to reduce the ice load on the conductor. Various tests have confirmed the effectiveness of the treatment, highlighting a delay in the formation of ice and a faster removal on a treated sample compared to a standard conductor.



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An innovative conductor for the Vado-Vignole line.

De Angeli Prodotti has been engaged in the production of an innovative conductor for applications **with extreme ice overload** and, at the same time, for increasing the transport capacity for the **Vado-Vignole line**.

Thanks to this conductor, it will be possible to enhance the electrical network by eliminating the bottleneck on a crucial 400kV power line.

With its extensive experience in large-diameter conductors and special alloys, De Angeli Prodotti is one of the few suppliers capable of ensuring the quality and reliability for the supply of these extraordinary conductors!



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JANUARY, 2018

We start 2018 with enthusiasm towards new initiatives!

We have now entered 2018 with a focus on the past for learning and an eye on the future to pursue **new and exciting goals**.

In this newsletter, we concentrate on the progress of our Industry 4.0 factory digitalisation project, which is advancing rapidly, and the award ceremony for the *IDEAngeli* 2017 project. **DAP 4.0** aims to help us make every person working in our company fully aware and a protagonist of their work. For this reason it is gradually expanding to every department.

We are studying our production processes together with the entire team to understand them better, share them with everyone, and improve them, to be at the forefront and withstand the enormous pressure of competition. It is extraordinarily important to **unleash the best of everyone's intelligence and professionalism**.

Even the small celebration we had in December to reward the luckiest *IDEAngeli* was an opportunity for meeting and reflecting on the enormous potential represented by the creativity of all the people working at De Angeli Prodotti.

Finally, we remember with gratitude our dear collaborator **Mrs Rossana Isolati**, who passed away prematurely. She will always be an example for us to tirelessly seek new energy for improvement.

“

The greatest ideas are the simplest ones

William Golding

FEBRUARY, 2018

Improvement, training, quality to meet the toughest challenges

In this freezing February, there is no shortage of hot and interesting topics for our newsletter.

We have implemented a Kaizen project in the Stranding Department on the **T60 roughing machine** with widespread participation from colleagues. The project team has tidied up, renewed equipment, and defined a better work cycle. I personally attended the presentation of the project held by the young **Dennis Ganguzzi** and **Viorel Popusoi** and was very impressed by the quality of the work done by the entire team: congratulations to everyone!

As we know that **our strength lies in our people**, we have renewed and strengthened our training plans, which will be supported this year by our partner **Niuko** from Padua. Many colleagues will have the opportunity to deepen their skills and engage in dialogue with other leading companies on the themes of modern organisation: **improvements and innovations arise only from study and comparison!**

As many of you may have experienced directly or through our newsletter, our company is energetically progressing to constantly renew its product portfolio and internationalise its clientele, searching for increasingly challenging market niches. That's why we have recently strengthened our Quality Team with Mr **Michele Previatello** and expanded our Technical Office with **Lucia Garbellotto**, graduated in Materials Science.

“

Sincerity, there is no gold that can buy it

Carlo Goldoni

MARCH, 2018

**Ambitious projects and new markets require an
increasingly strong team**

This newsletter introduces some new and interesting projects and directions for our company.

The Vado-Vignole line is a crucial hub in our national power grid, and we have designed a highly performing and large conductor – currently in the production phase – that we supply to Terna along with all the fittings and insulators developed in collaboration with our partner Bertolotti. It is a source of pride for us that whenever Terna undertakes a challenging and demanding project, De Angeli Prodotti is the natural partner. Not by chance, the first line of our Corporate Strategy is **“To be the most innovative producer of overhead conductors in the world”**.

Therefore, we are always exploring new markets (where significant investments are expected, such as in the Middle East), and we approached them with our recent **participation in the Dubai exhibition**.

“

*Whatever is said out there, words and ideas
can change the world.*

John Keating (“Dead Poets Society”)

APRIL, 2018

Meetings with suppliers and clients but with an eye on employee satisfaction

April, every drop a barrel," says a fun popular italian proverb in the agricultural-meteorological context, and certainly, we in the industrial sector haven't let the month go by without watering the seeds of new initiatives!

With the arrival of good weather, we took the opportunity to **extend the parking lot** and **make space for the cars of the new colleagues** we recently added to our team.

Our engineering colleagues went to France to **visit our Franco-Japanese partner Toray**, which is collaborating with us in developing the **new generations of conductors with carbon fiber cores**, cutting-edge globally in building increasingly modern power grids.

Furthermore, we have set in motion in order to not miss the historic opportunity of electric mobility – the so-called **e-mobility**: for the reduction of carbon dioxide emissions, the **cars of the future will be hybrid and electric**. For this reason, **we collaborate with an important partner like Magneti Marelli** to develop enamelled wires and tapes dedicated to this fantastic new market.

“

Ideas do not scare those who have them.

Vasco Pratolini

MAY, 2018

We invest in innovation and collaboration for a future of growth

This month, the newsletter is so extensive that it leaves only a little space for my introduction: this is a good sign of activity!

There are significant investments such as the **8 new high-productivity and low-consumption lines** on the way, demonstrating the **company's courageous commitment to strengthening enamelled wire production in Italy against competitors who are relocating to Serbia**.

The story of **Ahmed El Asri** (our experienced cord operator) who moved to France to our subsidiary TCH De Angeli is a testament to the **formidable potential for collaboration between our facilities to most effectively meet the market**.

Innovation is never lacking in our company, and this month we took the opportunity to better explain the technology behind our ultra-modern **ACCM conductor with a carbon fiber core (essential for our future)**, for which, after many years of development, we received the first order!

“

If nature needs new ideas, it seeks associations, not isolation.

Steven Berlin Johnson

JUNE – JULY, 2018

Efficiency and continuous improvement in favor of working conditions and the market

In this Newsletter, which exceptionally covers two months (due to the considerable number of ideas that we have found positively evaluated), we address topics **of efficiency, improvement of working conditions, and the market**. That is, everything a company needs to do to succeed.

On the efficiency front, **Planned Maintenance** cannot be underestimated: for several years, we have had a team working in this field, and now **the new manager, Enrico Merlin**, has developed a new plan to strengthen this activity and keep the plants always in order, reducing extraordinary maintenance interventions.

In the Stranding department, we have introduced a **coil pusher** that can help move heavy packages more easily, and initial experiences show that **working conditions have improved**.

At the CWIEME fair in Berlin, several exciting challenges were proposed for our company in various areas, including **electric mobility and renewable energies**, which can become a development ground for new and interesting products in the coming years.

“

More work, the more people see you working, and the more they want to collaborate with you, and vice versa.

Stephen Root

AUGUST, 2018

Innovation never takes a vacation

This summer newsletter is certainly not about holiday idleness but industrial dynamism!

First and foremost, training and organizational improvement hold strong with the **Talents Course** and the creation of various **A3 improvement groups in all departments**.

As for France, there is also a plan currently underway to strengthen collaboration - coordinated by Giacomo Sarti - which recently saw a visit from our colleague from TCH De Angeli Gael, looking for concrete ideas to apply organisational Best Practices in both plants and fully develop all possible synergies.

A brand new 30-metre-long line went into operation in the Wrapping department, **to produce Kapton-insulated conductors** - a material with very high electrical and thermal performance - according to the latest technology, in line with our strategic thread "More and more high-tech winding conductors".

“

Innovation makes the world go round

Robert Metcalfe (Ethernet inventor)

SEPTEMBER, 2018

Knowledge and awareness bring great results

This newsletter brings a great organisational news: **we have created a room in the company that we have called Dojo**, inspired by the Japanese martial arts, and we have filled it with all our best ideas made available to everyone: **safety at work placed** first and foremost, **respect for the environment** for ourselves and our children, the most advanced **organisational methods based on the involvement of people**, and **our ambitious strategy to make the world of energy more modern and sustainable** with increasingly innovative products.

During the month of **October**, the **Safety Month**, all of us (and there are more than three hundred of us!) will have the opportunity to visit the Dojo, **learn how to work without getting hurt**, and take a dive into the organisational culture of our company that makes us special.

Successful companies are based on collective and widespread intelligence: that is why it is essential that everyone is fully **aware!**

All our colleagues come from multicultural backgrounds with no distinction of gender or race: what do they have in common then? **Our colleagues have passion, they are reliable and determined, they know how to create integration.**

They are motivated people and critical thinkers. They are willing to **take the initiative** and make their own way in their **professional development**. **They like to work in teams**, they play different roles in different contexts and **they share our core values**.

“

*Knowledge is a treasure,
but practice is its key.*

Lao Tzu

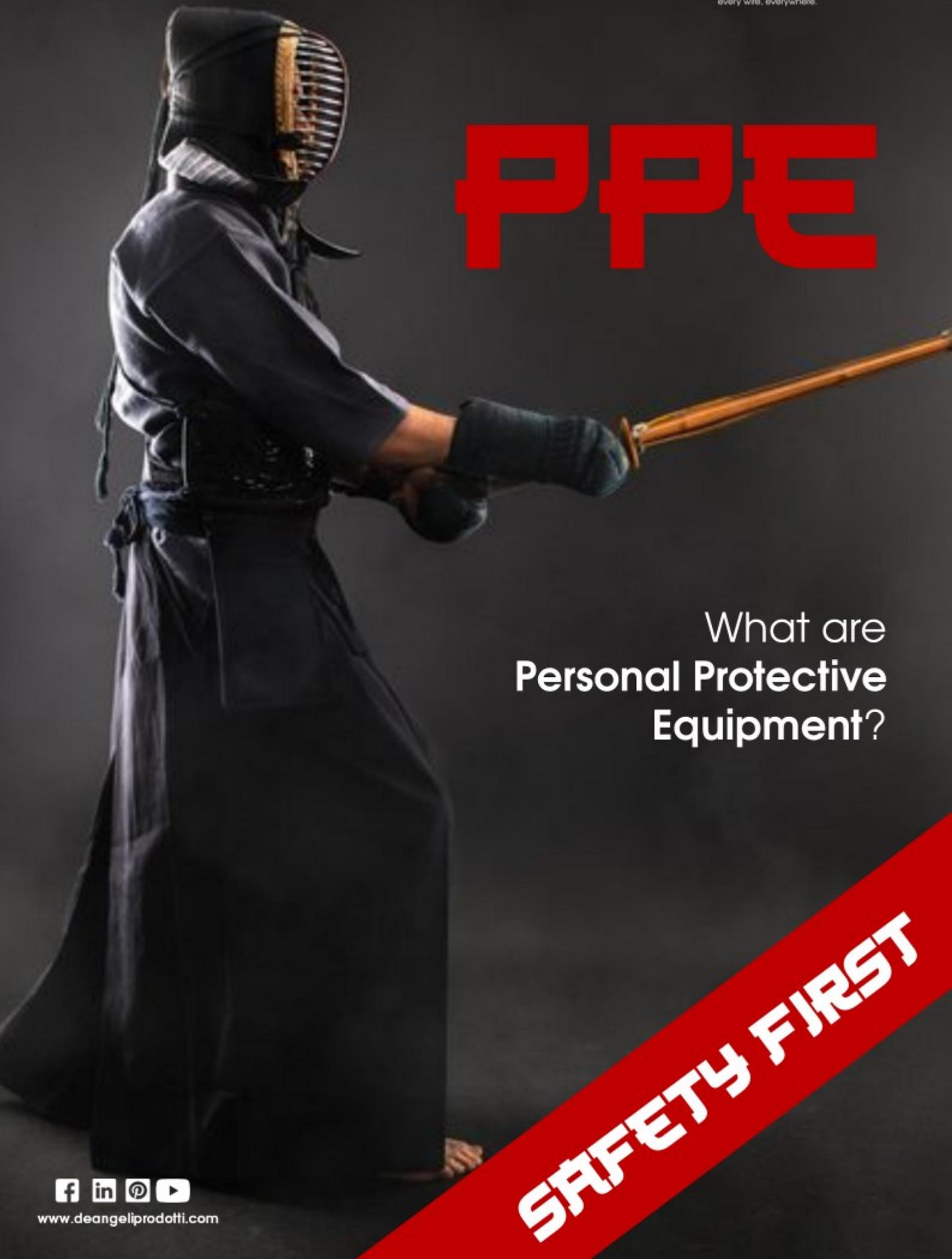


DE ANGELI
PRODOTTI
every wine, everywhere.

THE DOJO

An always-open
gym to **train**
corporate culture

SAFETY FIRST



PPE

What are
Personal Protective
Equipment?

SAFETY FIRST



ENVIRONMENTAL GOALS

What measures do
we take for **eco-friendly**
production?

SAFETY FIRST

STRATEGY

What are the **company's goals** for the near future?

SAFETY FIRST

OCTOBER, 2018

Safety first

This month of October is particularly important because it has been dedicated to **Safety**. It is a fact that at De Angeli Prodotti we are hundreds of people handling thousands of tonnes of conductors every day.

That is why we must make sure to always put "**Safety First**" and to instil in the mindset of every team member this mantra: "**Safety starts with Me**".

We are proud to have a **wonderful gym like the Dojo** to share this message with the long-standing members of the company, and to teach it to all the new young people we are adding to our team.

Also making us proud was our conductor **with a multi-wire carbon core with trapezoidal cones**: the first in the world of this type to be installed!

October, however, also saw the **presentation of the A3s** of our "Talents" teams.

I want to celebrate this event with great optimism because it unfolded the potential of so many colleagues, who demonstrated their ability to collaborate beyond the boundaries of their own department and specific skills, according to the most modern criteria of "problem solving" and beyond the bonds of hierarchical relationships: congratulations!

“

Everything has to be learnt, not to perform it but to use it.

Georg Christoph Lichtenberg

NOVEMBER, 2018

Out innovation and inside continuous improvement

The success of a company is built on many elements that all combine to achieve extraordinary results: **continuous improvement, attention to team members, creating ever more innovative products**. All these important factors are encapsulated in this Newsletter.

We asked **Mario** to work full-time on the realisation of the *IDEAngeli* and the results have been seen, with a noticeable acceleration of the construction sites and the fulfilment of some interesting realisations.

For the wellbeing of our ever-growing team (we are now more than 300), we have some important improvement sites underway: the **replacement of the roof of the Drawing Dept, the renovation of the façade and thermal insulation of the Office Building**, as well as the **rearrangement of the changing rooms** with new modern lockers to accommodate all new colleagues.

As far as products are concerned, the development of our new **ACCM carbon fibre conductor** is attracting increasing interest from Transmission System Operators (TSOs) and is poised to be an important **spearhead for the future of our company**.

“

*Take the best that exists and improve it.
If it does not exist, create it.*

Henry Royce (Rolls Royce founder)

DECEMBER, 2018

Happy holidays!

As we reach December, it is natural to look back and take stock of 12 months full of challenges, opportunities and a lot of passion. Among the thousands of things we could select to mark this 2018, I want to choose **one data that makes us proud**, because it is a concrete contribution to our industry and society: **we are now more than 300** colleagues in De Angeli Prodotti! Many new young talents have joined our team in the factory, several engineers have strengthened our R&D department, other young people support maintenance, sales and other services.

Another milestone of this 2018 is **the birth of our organisational training gym, which we have named Dojo**: as we get bigger, we have to practice to **organise ourselves in a more and more modern way**, pay great attention to **working safely, respecting the environment and improving the sustainability of the energy world** in which we are a major player.

“

*Only together can we achieve
what each of us is trying to achieve.*

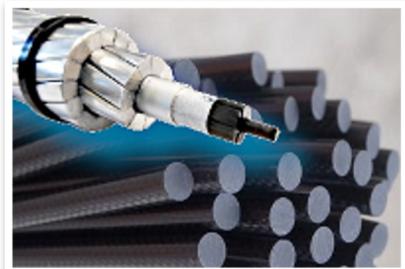
Karl Theodor Jaspers

2019

The year of carbon conductors and the new Litz wire department

How an ACCM Conductor is made

Stronger than steel, as light as aluminium. We see carbon fibre applications almost everywhere: from the first aerospace rockets to military applications, automotive, buildings, sports, design and art. The 21st century material is also entering the energy field as reinforcement for overhead conductors. But how is it produced?

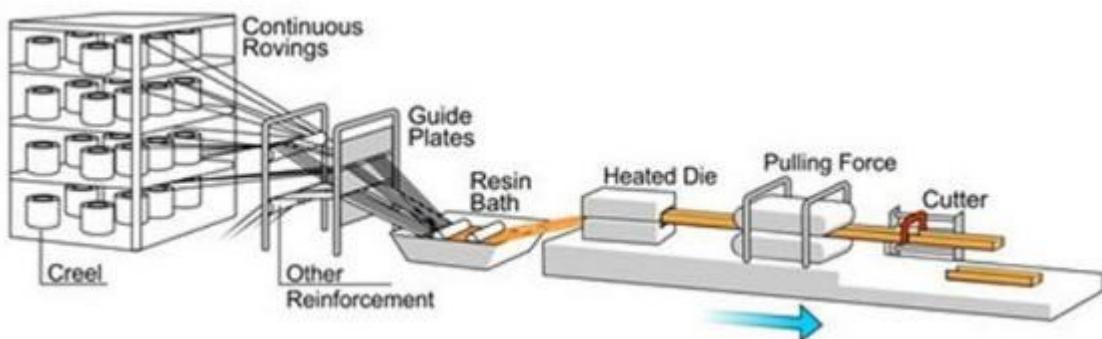


How is carbon fibre produced?

The **process of producing a carbon fibre yarn is called pultrusion** and is similar to extrusion but involves the extraction of the workpiece ("pul-" is therefore used instead of "es-").

Like extrusion, pultrusion creates continuous, straight profiles of constant cross-sectional area. Patented in 1959 by Californian W. Brandt Goldsworthy, the pultrusion process, described in the figure below, requires a basket containing several carbon fibre spools. The basket is where the fibres meet the liquid resin, and where the hot mould is located in which the profile takes shape and becomes rigid, meanwhile a chemical reaction process occurs that imparts the thermal properties to the pultruded composite wire. Hydraulic extractors provide continuous product movement (remember the prefix 'pul-' in the name 'pultrusion').

The combination of tensile strength and mould temperature gives the product the necessary mechanical and thermal properties: **tensile strength above 2600 MPa and glass transition temperature above 180° C**



Are you the
between
and
it is!

$$\rho_{cu} \frac{\partial T}{\partial x} - \frac{\partial}{\partial x} (k_x \frac{\partial T}{\partial x}) - \frac{\partial}{\partial y} (k_y \frac{\partial T}{\partial y}) - H_u \rho m_m \frac{\partial \alpha}{\partial t} = 0$$

curious
relationship
temperature
speed? Here

- c = thermal capacity of the material
- u = pultrusion line speed
- HU = maximum heat of reaction
- mm = mass fraction of the matrix
- α = degrees of cure
- ρ = material density

The independent variables x and y describe the longitudinal and transverse directions, respectively. The cure ratio α is a function of temperature and degree of cure, so it is a function of position, satisfying the steady-state condition. [Pultrusion Process Characterization - NASA Document NAS8-37193].



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Go Litz !

We thought about it, we wanted it, we studied it and finally here it is! **The brand new litz department is finally open!**

The future of energy and of our very lives passes through small revolutions: sometimes invisible and seemingly simple (like wireless chargers for mobile phones, or induction cookers); other times incomprehensible and much more complex (like particle accelerators), other times obvious and unwieldy like a super-fast train... in all cases the litz wire plays a fundamental role, to make possible what would not be possible with a traditional wire.

Litz is a term derived from the German language meaning "twisted, entwined". By twisting hundreds or thousands of small elementary conductors, litz wires and cables **limit losses in the transmission of alternating current** due to the so-called skin effect, especially at high frequencies, where the conductivity of a single conductor of the same cross-section would be much lower, because the alternating current tends to be distributed more on the outer surface of the conductors, effectively making a part of them unused. Innovative products and processes will be increasingly used in the future, and De Angeli Prodotti believes that innovation and the technological content of its products are the key to building its success. The ability to transform the ordinary into the extraordinary, the impossible into the possible, will play an increasingly important role in the world around us, just as it does within the company: the investment in a new department



entirely dedicated to an innovative and technological product, equipped with plants specially optimised by our engineering department, and therefore capable of guaranteeing top production in terms of efficiency and quality, demonstrates the importance of this idea for De Angeli Prodotti.

In this sense litz wire is the perfect summary of **experience gained through decades of producing** innovative, globally award-winning conductors and through a range of products and specialties with few equals on the market. Now more than ever... Every wire, Everywhere.



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JANUARY, 2019

An efficient company for an environmentally sustainable future

The first 2019 newsletter does not disappoint and covers the important topics of **continuous improvement and respect for the environment**. We proudly present the Kaizen worksite that we have carried out on **vertical ovens 46 and 47**, under the supervision of Francesco Gallocchio and our super-consultant Mr. **Acquasaliente**, with the participation of **A. Roncon, E. Avezzù, C. Donea, S. Lombardo, M. Nedita, D. Caredda and N. Andriotto**, colleagues who are experts in the field of enamelled wires and flats, and who are motivated to improve processes, products and the working environment. We opened doors in the walls, doubled the spoolers, arranged the workbenches, and so on: **now the whole area appears in a new, more organised and modern light**, and we take courage to proceed with other Kaizen worksites in other areas of the factory. During the Dojo visit, we all shared the importance our company attributes to environmental respect, which is both a duty to future generations and a fabulous development opportunity for the latest technology. Looking ahead to the upcoming maintenance of the large **photovoltaic system** installed in 2011 on the roof of the Stranding factory, we review the many advantages that this technology offers in support of environmental sustainability. In addition, we introduce to all colleagues the topic of **e-mobility**, which is finally developing all over the world to reduce traffic emissions, and **formalise our company's entry into this promising sector**, with small-section enamelled flat wires and reinforced insulation offering superior electrical performance.

“

When you think you have all the answers, life changes all the questions.

Charlie Brown

FEBRUARY, 2019

Contamination of ideas and new plants for a cutting-edge future

February is a shorter month than others, but news is not lacking. The development of many new products is proceeding smoothly, and we have launched our **brand-new line to produce conductors insulated with MICA**. The precision of tape application must be so meticulous, and customers are so demanding, that the line is equipped with an automated camera system to ensure the quality of insulation. Engineer **Miko** from **ABB** Finland has already visited us during the month and was quite impressed, so the approval process has started to open up this new important market for our company.

As you know, we are betting everything on the youth and their great enthusiasm, and in this newsletter, we want to celebrate a project we funded in recent months, called Contamination Lab. In this initiative, a group of students from different university faculties committed to working on our concept of "Smart Conductors", which we are developing to make transmission networks smarter and more flexible, promoting the integration of Renewable Energy.

Finally, let's take stock of our **Cogenerator**, a tangible sign of our environmental commitment and a key element of our competitiveness: with this investment, our company demonstrates the possible synergy between ecological sensitivity, efficiency, and the defense of employment in our national industry.

“

I have never thought of the car as a means to an end, but rather to be a part of it, just like the connecting rod and the piston.

Juan Manuel Fangio

MARCH, 2019

A digital transformation for an increasingly smart company

Our company is constantly evolving, and the newsletter is a great opportunity to share some of the most interesting news, making everyone aware of the development and modernisation plans we are continuously implementing.

A significant aspect of our company's growth is undoubtedly the pursuit of **increasingly intelligent information management** to facilitate people in their work and make everyone more aware of their achievements. As we felt the need for stronger initiatives amidst numerous improvement ideas, **we recently welcomed our new young colleague Michele**, who will undoubtedly lend a hand in advancing the 1000 ongoing projects.

On the front of innovative creativity, we have a very ambitious idea that combines energy and digitalisation! To promote the Smart Grid in energy transmission, **we want to introduce optical fibers as sensors in our conductors** and develop data readers. We have recently entered into an **agreement with NKT Photonics**, a highly advanced company in this sector, which will assist us in jointly developing this idea with great potential.

Finally, it is a pleasure to highlight that **we have opened our company to the visits of many young students**: we help them understand the world of work, and you never know, **we might discover some talent to add to our team!**

“

An orchestra cannot play a piece that is too difficult even for just one of its members

Wu Ming

APRIL, 2019

An increasingly significant European presence

We have an extensive training plan in the company to enhance the potential of all our colleagues. We place so much importance on building a well-prepared and motivated team that if necessary, **we even stop the machinery to attend training courses!** In the field of software tools, we want to take a step forward, so we have set up a nice room specifically for training. This month, we will start with **Excel**, which helps interpret the enormous amount of data we collect, for example, from production.

We are also warming up the engines in order to attend a **trade fair in Berlin** to meet our clients and seek new ones. This year, we have many innovations, such as our entry into the automotive sector to promote electric mobility.

Let's not forget that we have a factory in France in Le Havre - **TCH De Angeli** - where our **engineer Mr Giacomo Sarti** has moved a few months ago. We have started a path of regular visits from our French colleagues to integrate well and enhance the best experiences from everyone. This month, Valerie came to visit us along with several colleagues from production and maintenance, **making our team stronger and more cohesive.**

Remember that if we consider the two factories together, in the field of energy transmission conductors, **our group is the largest in Europe**, not only for the most advanced technologies but also for production capacity!

“

To teach is to learn twice.

Joseph Joubert

MAY, 2019

New production milestones thanks to organisational improvements

In May, the company carried out several interesting activities for continuous improvement in various areas, so... we decided to celebrate.

A visible and undoubtedly very useful improvement concerns the asphalting of the yard, which is now perfectly smooth and makes the movement of materials easier: surely all colleagues using forklifts will be pleased with this change!

As regards training, we started an Excel course (in our equipped room with 6 computers and a huge screen) involving many colleagues to enhance information processing skills.

An important technical achievement was reached with the installation of the large conductor supplied to Terna for the Vado-Vignole line: once again, De Angeli Prodotti demonstrates leadership in the production of cutting-edge conductors for energy transmission.

“

The more we know, the faster we learn new things.

Josè-Marie Griffiths

JUNE, 2019

A new awareness to be leaders in all sectors

In the month of June, the newsletter allows us to share some fundamental topics for our future. In the spotlight is a **new Kaizen improvement project** for the organization of the **Fiberglass department**: for several years now, our company has entered this sector focused on Renewable Energies, and growth has led to new investments and the transition to a continuous cycle. Now, the maturity exam is represented by new stringent demands for quality and efficiency! Another crucial theme of our strategy is the **expansion of the product range**, with the aim of increasing our portfolio of high-tech solutions: the **OPGW conductors with integrated Optical Fibers** that we supply to Terna are a valuable result in this context. Did you also know that for some time we have been targeting the Automotive sector, which is rapidly shifting towards the revolutionary Electric Mobility? The **Awareness Questionnaire** recently distributed to all colleagues, which we discuss in this newsletter, is a step in the path of widespread improvement that requires IATF certification for the automotive sector, and it can help us make our products increasingly industrialized and reliable through training.

“

Alone we can do so little; together we can do so much.

Helen Adams Keller

JULY, 2019

New ideas and consolidated collaborations

It's nice to present in every newsletter news that covers different areas of business life.

From a technical-organisational point of view, in this issue, IDEAngeli is represented by a great achievement made in the Stranding department, which shows how **good ideas come from the ingenuity and initiative** of those working on the plants.

On the commercial front, we can celebrate the twenty-year collaboration with the Norwegian company **More Trafo**, which is growing with Tesla in the e-mobility sector that, as you know, we have targeted in our strategy.

Then the **issue of parking spaces** allows us to explain our extensive plan to arrange spaces beyond the road, to improve logistics and the comfort of all collaborators.

“

Nothing is more dangerous than an idea when it is the only one you have.

Emile Chartier (Alain)

SEPTEMBER, 2019

Ministers, carbon fibers, and works of art!

The newsletter this time is so dense that there is no space for the introduction.
Happy reading!

“

*Doing old things in a new way.
That's innovation!*

Joseph Schumpeter

OCTOBER, 2019

A modern and conscious company towards an increasingly smart Future

This October is truly special for our Newsletter.

The first article announces a **historic goal**: the acquisition of **two major contracts in Italy and Europe for Carbon Fiber Core Conductors**. We started dreaming in 2000, **patented our ACCM technology in 2006, and now in 2019, we finally realize our vision**, and we are thrilled! It marks the end of a development journey and, at the same time, **the beginning of a new era**.

Technology is increasingly finding its way into the **organisational structure** to make collaboration among all colleagues simpler and more fluid. **With the WhatsDAP app**, a new chapter of modernisation begins. Communication barriers fall: **24 hours a day**, all workgroups can **share their ideas and experiences in real-time**.

And then, the **Safety Month** involves everyone again with significant innovations, demonstrating the company's commitment to this crucial aspect: "**Safety First**" and "**Safety Starts with Me**" are our mantras.

Finally, a **new section on Safety and Environment Indicators is introduced**, which will accompany us every month.

“

There is no favorable wind for the sailor who doesn't know where to go.

Seneca

NOVEMBER, 2019

A month of visits looking to the future

This newsletter is entirely dedicated to some visits that our company recently received, opening up with confidence to the School and some important Customers.

"*Industriamoci*" is a wonderful initiative because it **brings young people like the students from Manfredini closer to the world of industry**, and for us adults, it is a precious opportunity to support young people who want to consciously choose their future.

The visits from the **Electric Networks of Belgium - ELIA - and Germany - Transnet BW** - are also very important because **they take us into the future of energy**, through the rationalisation and **modernisation of obsolete overhead lines**, and the **connection of the wind parks in Northern Europe**, made with our most innovative conductors.

“

The great innovations happen when people are not afraid to do something different from the usual.

Georg Cantor

DECEMBER, 2019

Merry Christmas!

We are in December and we are closing a 2019 full of news.

I choose some important ones that project us into the future:

- We pledged the **first important contracts for Conductors with a Carbon Fiber Core;**
- We entered the **Electric Car sector;**
- We expanded our product range with **Kapton, Mica, Litz wires, and Twisted Ropes.**

In 2020, an important task awaits us: to fully realize these new exciting activities!

“

Only together can we achieve what each of us seeks to achieve.

Karl Theodor Jaspers

2020

The year of digitalization of carbon conductors: ACCS-Sens is born!



Carbon conductors: no more disputes over damages that could have been avoided without knowing who was responsible!

We have designed ACCS-SENS with integrated optical fibers: a revolutionary real-time monitoring system to prevent damage to carbon, or if it happens, to know where the damage is and who is responsible. Our conductor **ACCS** (Aluminium Conductor Composite Single) is avantgarde, as the **core is protected by an aluminum tube** that ensures insulation from the external environment.

Driven by the deep innovation spirit that sets us apart, we are pleased to announce that after years of studies, research, and technical tests, we have developed the first energy transport conductor with **integrated optical fibers used as sensors** capable of providing **information about its health** and capable of warning in case of **improper handling** before causing damage from production to installation. The world of **digitisation** is spreading rapidly in various aspects of our lives, combining technical solutions with the need to store, process, and save data, making our work increasingly safe and "smart". The field of overhead power conductors could not remain excluded.



The new technology combines the performance of a conductor with a core made of carbon fiber with the safety of a **smart monitoring system** capable of providing real-time information on the integrity of the conductor. Yesterday a dream, today a reality.

What does "Intelligent Conductor" mean?

- Imagine **receiving a notification that alerts you when the carbon fiber core conductor undergoes stress** exceeding what is indicated in the installation manual.
- Imagine knowing **precisely the point of a possible defect** in the conductor before proceeding with an in-depth analysis.
- Imagine that an **artificial intelligence** system is capable of distinguishing different types of defects.
- Imagine having access over time to **stored data to construct the history of the conductor** from its manufacturing to its installation.

There is no need to imagine anymore; this technology exists and is now available. *The future is now.*



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JANUARY, 2020

The future of the company speaks automotive... and a bit of German!

Let's go back to talk about our entry into the Automotive sector in this newsletter, in view of the significant development in the electric car industry. This month three positive events have taken place:

- We received the letter of conformity for **IATF certification**;
- We installed the important modification with 16 steps on oven 39.

As you can see, we have been quite busy!

Since our expectation is that the future of electric cars will be played out in Germany, we have had a new technical/commercial talent, **Markus Gundlach**, in training with us since January. He will help us **increase our presence in the German market**. Welcome to our team!

Then, the company's digitisation is advancing with the **DAPBox** project, which focuses our skills and makes them available to all colleagues, with many new opportunities, including **increasingly extensive training**.

“

Ideas walk with the legs of men.

Pietro Nenni

FEBRUARY, 2020

Future's core values: Eco-sustainability and Social Responsibility

The company is progressing on multiple fronts to contribute shaping a **sustainable future across organisational, social, environmental, and energy aspects**.

In our pursuit of adopting a **certified Organisational Model for Social Responsibility**, we are finalising procedures and training to be well-prepared for the upcoming DNV audit scheduled for March 4-5-6, focusing on SA 8000. This marks another stride in organisational modernisation, involving our dedicated team.

Within our strategic framework, **green products** are increasingly pivotal. For this reason, **we aspire to play a leading role in advancing electric mobility**, a transformative force set to reduce polluting emissions and revolutionise the automotive sector.

In the realm of energy transmission, we are making significant strides in developing highly innovative conductors. Our pride lies in the new **ACCS conductor, featuring a carbon core and integrated optical fibers for real-time integrity monitoring**, symbolising a cutting-edge achievement.

“

Take a good idea and keep it. Pursue it and work on it until it works well.

Walt Disney

8 PRINCIPLES FOR A COMPANY ETHICALLY CORRECT

1	CHILD LABOR	The employment of school age workers is prohibited as required by current legislation on the matter.
2	COMPULSORY WORK	It is forbidden to obtain a job under threat of any kind, with physical or psychological blackmail , through the requisition of identity documents, or with the request for money in exchange for work.
3	HEALTH & SAFETY	It is necessary to adopt useful measures to prevent accidents and damage to health, ensuring staff training for safety and accident prevention .
4	FREEDOM OF ASSOCIATION AND RIGHT TO COLLECTIVE BARGAINING	The right to freedom of association and membership of a trade union is guaranteed , without any discrimination for trade union representatives and members.
5	DISCRIMINATIONS	It is forbidden to professionally favor or penalize a worker due to race, sex, age, sexual orientation, social class, nationality, religious faith, disability, trade union or political membership.
6	DISCIPLINARY PROCEDURES	Corporal punishment, verbal attacks, physical or mental coercion and humiliation cannot be used for any reason; the disciplinary procedures permitted are those provided for by law and by the CCNL for the Metalworking and Plant Installation Industry.
7	WORKING HOURS	Ordinary and extraordinary working hours and rest shifts are arranged in compliance with the provisions of the CCNL for the Metalworking and Plant Installation Industry.
8	SALARY	Compliance with the salary agreements envisaged by the CCNL is guaranteed , with payment of overtime in the pay slip and payment of social security contributions.

The 8 ethical principles for an ethically correct company: they represent the fundamental points that guide us in carrying out our work according to the dictates of the SA8000 Certification for Corporate Social Responsibility.

MARCH, 2020

Responsibility, attention, but above all, RESILIENCE

This month, the newsletter is coming out a bit late and coincides with the worldwide spread of an **extraordinary health emergency** resulting from the Coronavirus pandemic, which has also affected our company community. For this reason, I believe it is important to share with you some news and considerations.

The first news, the most uplifting for all of us, is that I have spoken with **colleagues who tested positive for the virus, and they are at home and doing well without fever**.

Secondly, I would like to express my **gratitude** to all those who are at their workplace. As you know, **our production chain has been recognized as Essential for the Country** by the March 22nd Decree: the **lights turn on** in the cities, **electricity reaches hospitals**, health and food systems can stay operational **because companies like ours continue their activities resolutely and proudly**. As heroic doctors and nurses show us in these weeks, dedicating themselves to save the lives of many citizens, the legitimate fear of this virus does not eliminate the **responsibility to play our social role** for the community and for our future, that of our children and grandchildren. Of course, we must do this by **defending the health of everyone**, working safely, **and respecting the best health and behavioral norms prescribed by Scientific Committees**. Thirdly, I would like to provide a clear explanation of how we have operated and how we intend to operate in the future. You know that a Health Protocol for the application of government decrees has been approved, signed by social partners. We **have applied it rigorously** so that **social distancing**, which is essential in the fight against the coronavirus, can be implemented in the company. There are many signs around the factory that **I ask you to respect carefully** for your own defense, to not contract the virus, but above all, **to protect the elderly or more vulnerable people** with whom we may come into contact. There are **masks, sanitizers, limited access in canteens, body temperature checks**, instructions **not to come to work if feverish**, invitations to maintain a **distance of at least one meter**, thorough **cleaning** at each shift, **smart working** where applicable, and much more, which we have gradually learned to make part of our behavior.

I would also like to explain that **we immediately set up an emergency plan**, which was activated when one of our colleagues tested positive. We immediately engaged a specialized company **for sanitation** – a very thorough and impactful activity – extended to **the entire production site**, offices, canteens, laboratory, and every environment, receiving approval and appreciation from SPISAL (local health authority). In an attempt to force us to close, **defamatory reports** were filed with the Veneto Region regarding our alleged non-compliance with the protocol. **SPISAL returned and once again certified the correctness of our actions**, reaffirming their entirely positive judgment. In conclusion, I would like to share this consideration with you. Naturally, I hope to be proven wrong, but listening to scientists deeply involved in the reality of this health emergency, I sense that the difficult situation **will persist for a long time**, and that **the official numbers of positive cases are underestimated up to 10 times compared to reality**.

Therefore, we must learn to calmly apply, with the contribution of everyone, an idea of sustainable work coexistence with the virus that also considers the future.

With responsibility and attention, without panic, and with the **Resilience** that is one of the key values of our company.

“

For the sake of goodness and love, man shall let death have no sovereignty over his thoughts.

The Magic Mountain – Thomas Mann

APRIL, 2020

Ready to face the future thanks to innovation

Do we see the horizon line? With due caution, epidemiologists begin to talk about improvement in the infection curves and Stage 2! However, if the health emergency gives us some breathing room, **the economic crisis will soon show its cruel face**, assaulting family incomes and employment, worldwide and especially in Italy.

As always, **we want to be ready to secure not only health but also jobs and the well-being of all members of our** diverse, multi-ethnic **team** deeply rooted in the Italian industrial sector, which we are trying to preserve.

Innovative conductors for modern power grids, renewable energy, and electric mobility will be our key to a more sustainable and resilient post-coronavirus world.

Since, for the moment, we can no longer travel the world physically to develop and sell our products, we do it through **conference calls**, allowing us to maintain all important technical and business relationships.

Even on the Information System front, we are not sitting idle, and **with DAPBOX, we provide many new pieces of information and services for all colleagues.**

“

The pessimist sees difficulty in every opportunity. The optimist sees opportunity in every difficulty.

Winston Churchill

MAY, 2020

Let's look ahead to a brighter future!

Each Newsletter is an opportunity for reflection on the many ongoing company projects for Continuous Improvement. A small section is dedicated to the **Coronavirus** (and hopefully it's the last time!) to emphasise the importance of **continuing to follow Good Practices** (masks, distance, etc.) without getting distracted just when optimism is beginning to emerge, with the risk of falling back into the emergency of the past months. Many of you will have noticed that **the lighting in the factory has improved**: we are indeed finishing the installation of **new LED lamps** that allow us to work better and are environmentally friendly, reducing electrical consumption, as part of our company's ecological approach. It must be said that a really good job is truly succeeding, exceeding expectations. In the new neighboring warehouse (called North) that we acquired and have been renovating for several months, we are starting the new **single twist strander** in these days, which we installed **to produce copper strands**. It is a strengthening step for the Stranding Department, especially for the **Railway Sector**, where we are the main supplier to RFI (Italian Railway Network) and have orders for several thousand tons.

“

*For every minute we keep our eyes closed,
we lose sixty seconds of light.*

Gabriel Garcia Marquez

JUNE, 2020

We set off towards a modern and sustainable future

This newsletter allows us to share with all of you an interesting business success, turn our gaze to the past to track the recent history of the Stranding Department, and dream together of a more modern and sustainable future for our great country. Yes, it sounds strange, but **we will be installing a guard wire in a tunnel in Switzerland**, thanks to our customer **SwissGrid**, who increasingly places trust in our company.

It is also important to remember that our company operates within a large national industrial system, which, after a long period of hardship, deserves an appropriate revival. It can be comforting for all of us that our guiding principles (**energy transition, green revolution, digitisation**) are at the foundation of the **Colao Plan for the Revival of Italy**.

“

The future influences the present as much as the past.

Friedrich Wilhelm Nietzsche

JULY-AUGUST, 2020

A challenging year... but we are fine!

We have reached July, which is the month when we close our fiscal year 2020. This year has been truly challenging because the Coronavirus was the last thing we needed, but nonetheless, we managed to preserve the health of the team and not have a single hour of layoff. Frankly, it's a half organisational and economic miracle, given the conditions of the health emergency and the state of the global economy! That's why the newsletter focuses, despite everything, on many new positive topics. The company becomes increasingly modern and cutting-edge with our brand-new "Open Room" area, which receives compliments from everyone and is already being copied by suppliers and customers. "Safety First" is not just a saying; we have received the prestigious ISO 45001 Certification for safety. The company's investments continue to ensure the future employment of our 350 employees, despite the terrible impact of the Coronavirus on the beaten Italian industry. The new TLJ300 extruder for Aluminum in Drawing Dept has arrived! We will use it to enhance the production of Aluminum, improve quality, make tubes for innovative expanded conductors, and more.

“

Life is 10% what happens to you and 90% how you react to it.

Charles R. Swindoll

SEPTEMBER, 2020

A month of sustainability: health, environmental, and strategic

This month's newsletter addresses some of our dearest topics, all united by the central idea of **Sustainability - health, environmental, and strategic**. **2020 is a very particular year**, and we all had to shoulder some sacrifices in front of the violence of the Coronavirus. Now, a new **choice of responsibility** is requested by the medical-scientific community: let us, therefore, get the **tetra-valent influenza vaccine** (which is **free for everyone at De Angeli Prodotti**) to protect ourselves, our loved ones, and the community.

We have reached a new important organisational milestone in line with our Environmental Sustainability strategy: the **ISO 50001 Energy Certification** will help us consistently implement our energy efficiency projects. We also share a **great board** that aims to represent (in clear images for all colleagues) **our technological leadership in the field of conductors for energy transmission: from traditional conductors** (the famous wire with a diameter of 31.5 mm) **to the most innovative ones** (the **ACCM carbon fiber conductor**), we have developed an incomparable range of solutions for all our customers' needs.

“

*If you can't explain it simply,
then you have not understood it well enough.*

Albert Einstein

OCTOBER, 2020

New installations and new investments the basis of a solid culture

In the health and economic storm that afflicts this 2020, we continue our efforts to create the conditions for business continuity and development, to defend our working community, in the present and for the future, through **new investments, continuous technical and commercial activity**, and renewed attention to safety conditions. The Newsletter is a valuable transparency tool to make us all aware of the overall vision. We are proud to present a small jewel of technical and commercial patience: **the first installation of an ACCM conductor** (with a carbon fibre core) in Northern Europe, **in Lithuania**. It is an important **first complete test of the technology**, which has allowed us to focus on and solve all the critical issues, from the design to the supervision of the installation: **an appetiser ahead of the main course of the Terna project**, which will soon see us supply hundreds and hundreds of kilometres of ACCM conductor in Italy. A new plant (a **TLJ 300 for aluminium**) is starting up in the Drawing, which is strategically designed to **increase production capacity, specialise extruders and mills** to improve efficiency and quality, and develop new opportunities such as **aluminium tubes**. **Safety Month** will be even more important this year, because alongside the renewed focus on making sure no one gets hurt ("Safety First"), it will allow us to review the cautions necessary **to avoid Covid-19 contagion**. A nice surprise on this occasion will be *Il Piccolo Libro della Nostra Cultura Aziendale (The Little Book of Our Corporate Culture)*, which I won't spoil for you, but I am sure will help everyone to better understand our Organisational Model.

“

*A single arrow breaks easily,
but not ten arrows held together*

Japanese proverb

NOVEMBER, 2020

A company culture so strong you could write it in a book

It is always a great pleasure for me to write the Newsletter every month and to be able to tell everyone about our company news. This month we have the opportunity to proudly boast about **the entry of De Angeli Prodotti in "The Hundred Places of Industry 4.0 in Veneto"**. Digital technologies are shaping the future of production organisation, society and the economy all over the world, and **it is crucial for our company to be part of the industrial excellences driving this extraordinary revolution**. Attached to the Newsletter you will find a beautiful display board summarising our **Product Portfolio in the Electrical Winding Conductors sector**. We have entitled it "**Choose Your Wire**". If you keep it, you will never forget that **our team has travelled a long way over the years**, and the more experienced will be able to recall the different stages of this unstoppable growth in our product range: CTC in 2002, Litz in 2019, when Fiberglass, Kapton, 0.18 mm enamelled wire, ...? Certainly our customers know who to turn to when they have special requirements for their electrical machines! Then we are excited to present you with an ambitious project that culminates a journey of organisational modernisation that has been underway for many years: *Il Piccolo Libro della Nostra Cultura Aziendale*. There you find the whole essence of our raison d'être: **what we are and what we aspire to be**. Nonetheless. I am sure you will find many things you already know (all interlinked in a coherent pattern) and discover new things that will make you curious!

“

Tradition is a successful innovation

Oscar Wilde

DECEMBER, 2020

A look back at 2020 and a glance ahead to 2021

We have reached the last Newsletter of the year **2020**, a globally challenging year that will be forever remembered as **the year of the Coronavirus pandemic!**

Nevertheless, in our company, **we have not been discouraged**, and we have accomplished many wonderful things (**investments, modernisation, hiring, new products**), laying the foundation for **exciting new goals in 2021**. We hope for a more serene year in terms of health, social, and economic aspects.

Unfortunately, (to comply with the caution required by the Covid protocol), we cannot all gather together as tradition dictates to exchange greetings, eat panettone, and share laughs with the *IDEAngeli* year-end Lottery. However, **as promised, we conducted the draws anyway**, and you can see them here:

“

The eternal body of man is imagination

William Blake

CERTIFICATIONS

De Angeli Prodotti holds numerous certifications that describe its **organizational model** according to the main **safety standards** and in compliance with **environmental and social regulations**.



2021

The year of crossing the great Norwegian fjords

De Angeli Prodotti crosses the Norwegian fjords!

De Angeli Prodotti has achieved another significant milestone: **the crossing of the Norwegian fjords** with a new 380 kV transmission line built to bring more energy to the Stavanger area.

The project involves a new 380 kV transmission line constructed **to meet the increased energy demand** associated with the growing population **in the city of Stavanger**. De Angeli Prodotti was invited to participate in the tender because the client needed a special, resilient, and high-quality conductor to cross **the 2.7 km fjord**.



In our plant in Italy, a conductor made of aluminum and steel alloy was designed and manufactured, **one of the largest** ever produced in our factory and in the world, with a diameter of 56.7 mm and a weight of 6.40 kg/m. To reduce the corona effect and the brightness of aluminum wires, we proposed a sandblasted conductor. The sandblasting process takes place internally in a special machine that, through special guns, sprays specific sand onto the conductor to achieve a rough and clean surface.

The drums used have a diameter of 3200 mm, requiring **special low-loader trucks** for exceptional transport.



The drums were laid one by one, so the entry angle into the capstan is approximately 0°. The direction of the outer cover is R.H. (Right Hand), so the conductor enters the brake from the left. The number of turns of the conductor inside the capstan was 4, and no signs of "bird cages" were identified.



Explosive clamps were chosen to secure the conductor, which was specially cut and prepared. A sock was installed at the end of the drumsto assist in rewinding the remaining section. The other end was compacted by an explosive tape and subsequently prepared for the final installation of the clamp, which was done immediately after.

The span of the transmission line crossing the fjord is close to an existing distribution line that has been in place for decades but is no longer sufficient to transport large quantities of energy into the city.

The commercial department (represented by Vittoria Bottin) and the technical department (represented by Marco Scagnolari) visited the installation site to witness the **impressive infrastructure built to support the conductor**.



The construction sites of the transmission line were built on rocks, making them not easily accessible by wheeled vehicles.

In fact, a couple of helicopters assisted operators in moving around and transporting goods from one site to another. The helicopters were also used to bring the pulling steel cable from the south side of the fjord to the north side. The cable was used to pull the conductor along the towers through the pulleys.

This project has been defined as **one of the most spectacular infrastructures ever built in Norway**, given the enormous dimensions of the conductor, the towers, the equipment, but above all because it is built on one of the most spectacular and visited fjords on the coast, where some scenes from the latest "Mission Impossible" movie with Tom Cruise were filmed.

The mission was made possible thanks to **De Angeli Prodotti**!



READ THE NEWS ON OUR
WEBSITE
SCAN THE QR CODE!



JANUARY, 2021

Looking for new individuals to support big goals

This month, we are looking for new colleagues to support the company's growth. We are producing the largest conductor reel ever made in our history, and we are celebrating a Laboratory that has never been so beautiful and modern.

Let's kick off the year 2021 by stepping on the gas!

If you have any talented friends who would like to work with us, please introduce them to us. With all the ongoing projects and investments, we need reinforcements. To explain who we are, feel free to tell them that we manufacture the largest transmission conductor drums in the world and that we provide training in an advanced Laboratory akin to NASA.

“

The beginning is the most important part of the work.

Platone

FEBRUARY, 2021

Past and present come together, propelling the company towards the future

This newsletter is **dedicated to Valerio and Domenico**, who have retired. It seems impossible to come to work and not see them early in the morning, to gather courage and rely on their wisdom and energy. It consoles me to know that **all of us have learned so much from them**, and that the young replacements, Giacomo and Gianluca, are made of the same strong spirit.

As proof that we combine respect for the great protagonists of our history with an optimistic outlook always future-oriented, this month we celebrate **the launch of our new SKIP strander**. With this investment, we ensure greater productivity on 7-wire strands and long lengths of OPGW for our major client, Terna.

In order to better communicate to the market all our numerous initiatives and innovations, we have also **renovated our website**. Come visit us at www.deangeliprodotti.com, and you won't be disappointed.

“

I do not live for myself, but for the generation that will come.

Vincent Van Gogh

MARCH, 2021

Great projects and digital training towards new goals

It is indeed true that 2021 will be the year of carbon for our company, and it is a great satisfaction for the entire team to celebrate the **cover in the magazine “L’Energia Elettrica” showcasing our ACCM** (Aluminium Conductor Carbon Multistrand) conductor. It took a lot of patience (if we go back to 2007 when we patented it), but now, much perseverance is finally rewarded with coveted technical and commercial recognition! In the same vein of innovation that characterises us indelibly, many promising novelties are happening concerning our **“anti-ice” solution**—a surface treatment to reduce the formation of snow and ice sleeves on conductors, supporting the resilience of electrical networks. In the company, a **major training project is underway for all colleagues on the topics of digitisation and Industry 4.0** to ensure that the entire organization is at the forefront to face the challenges of the future in a modern way.

“

You plan. God laughs.

The most important part of any plan is to plan for when it doesn't go according to plan.

Morgan Housel

APRIL, 2021

Our "True North" is heading further NORTH!

The motto "In April sleep is sweet" does not quite suit us. Many improvement and investment projects, new hires, and innovative products are buzzing in the company: among all these novelties, we have chosen to start following the **expansion of the North Warehouse** in the Newsletter, which in the coming months will gradually reach its final form and help us **better serve the development of Railway Networks and Energy Transmission Networks**.

You all know that we are advocates of the social role of the company for the modern and balanced development of our country: therefore, it was a source of pride for us to discover that **many of the topics of the Recovery and Resilience Plan**, presented in recent days by **President Draghi to Parliament, are in line with Il Piccolo Libro della Nostra Cultura Aziendale**.

We will be proud to contribute to the revival of our country in line with the great missions of renewal identified.

In the meantime, **we are fortunate to be able to work hard to support our economy**, and the **increase in the income threshold for the Integrative Treatment** (formerly Renzi Bonus) allows us not to have penalties in our paycheck.

“

*"What do you know about tools, Frank?"
"They are only as good as the care you give them."
"You'll never learn a better truth than that, Frank."*

Richard Wagamese

MAY, 2021

We turn challenges into opportunities

Every great **opportunity** is at the same time a great **challenge**.

The Energy Transition that is at the heart of our corporate vision aims at decarbonising the economy, to slow down climate change by reducing CO2 emissions to zero.

However, the raw materials market is not yet ready to support this revolution and **copper and aluminium prices have skyrocketed!**

Let us therefore prepare ourselves properly for a future whose hidden difficulties we are not yet fully aware of.

Our product portfolio has been enriched by an important new player: in April **our first ACCS-Sens carbon core "digital" conductor was installed in Belgium**, and we have already received a new order of 300 km to be delivered by the end of the year.

To increase our expertise in the automotive sector, we **have created a dedicated E-mobility laboratory**, to be at our customers' side in selecting the best insulation systems.

“

The thumb rule for catching a ball on the fly:

- Fix your gaze on the ball*
- Start running and adjust your speed so that you keep a constant angle of gaze.*

“The Intelligence of Intuition” of

Gerd Gigerenzer

JUNE, 2021

10 rules for 20 future colleagues

In this June newsletter we would like to propose to all of you **to introduce us to some smart friends who would like to come and work here with us.**

We are hiring a lot of young people to kick-start the company's many investments, but **20 or so are still missing!**

We are looking for people who have a lot of energy, intelligence and spirit of cooperation, and who recognise the **Organisational Behaviour Decalogue** that we have been displaying in the factory in recent days, to make our Corporate Culture based on Trust extended to all.

We are continuing our strategic programme to contribute to the development of E-mobility, thanks to a new ultra-high-performance **polyimide-FEP taped** copper flat wire, suitable for supporting the stresses of the new Full-Electric Vehicles.

“

The best way to find out if you can trust someone is by giving them your trust.

Ernest Hemingway

JULY, 2021

A dynamic organisation for increasingly ambitious projects

Here is another exciting issue of our Newsletter that highlights our incurable dynamism. Over the past few days, our engineers **Davide Peroni and Debora Mimo** went to Belgium to the ELIA Electricity Grid, for a training session for the staff in charge of the installation of our ACCS-Sens 30 mm conductor, with a Carbon Fibre core and incorporated Fibre Optics that allow its integrity to be checked. On 14 July, **Francesco Gallocchio** devoted an entire day to the presentation of A3 projects, which involve a very large number of colleagues on various organisational improvement topics, and which demonstrated our ability to collaborate across different offices and functions to deal with complex problems. On July 7, **Terna**'s top management presented, in the presence of the Minister for Ecological Transition Roberto Cingolani, the new 10-year **18 billion** Electricity Transmission Grid **Development Plan** (+25% compared to the previous one), in which Terna presents itself as the director of a transition based on the integration of renewable sources, the strengthening of transmission capacity, interconnections with foreign countries, and infrastructure resilience.

These are all issues that underpin our strategy and encourage us to pursue our long-term business plan!

“

I believe that to make films you need two things, imagination and courage [...] the things I am most satisfied with have been done with an act of courage, if the image does not get dirty with reality, and does not oppose it, it clearly does not stay.

Marco Bellocchio

AUGUST, 2021

Significant growth through research and continuous improvement

August does not mean that the company stops or that the Newsletter remains without topics.

We closed a fiscal year in July 2021 with a **growth of 26%**, and drew up a beautiful **Business Plan** for the next 5 years, which aims at the development of the company with many **new investments and hires**, aimed at supporting the Energy Transition the world needs to slow down climate change.

In order to step confidently into the future, our factory organisation needs to modernise more and more, and therefore we have scheduled for next September the presentation to all staff of the **Operating Instructions** that the **Continuous Improvement Group** is preparing. About seventy of them are already ready and will be **available to everyone in the factory Totems**.

Our **Research and Development** process has aroused the curiosity of the University of Padua, who came to visit us to ask how we carry out our product innovations to talk to their students.

“

The world needs a change.

We need to transform the way we do almost everything.

Bill Gates - How to Avoid a Climate Disaster

SEPTEMBER, 2021

Mandatory Green Pass but also new installations, from Udine to Norway

This newsletter presents in detail and extensively the new obligations and sanctions set out by the government in the new **Decree-Law** imposing the **Green Pass to access workplaces**. The **deadline of 15 October** is very close and **we must hurry** to present ourselves all prepared in full compliance with the law and to make our responsible contribution to the protection of public health!

Do you remember the January 2021 newsletter in which we announced the birth of the **TEIST Giant Conductor**? Well, the 17-ton drums for the **crossing of the Norwegian Fjords** were installed a few days ago, and **Vittoria Bottin** and **Marco Scagnolari** went to visit the **construction site** to witness this impressive achievement.

Under the supervision of a large team of engineers from our Technical Department led by **Davide Peroni**, the installation of the **ACCM conductor on the Udine - Planais Terna line** was successfully completed. Our lightweight carbon conductor made it possible to **reactivate a power line** that had been switched off many years ago!

“

Learn the art of making mistakes and take lessons from them!

Richard Branson

OCTOBER, 2021

The price race of raw materials and energy requires great resilience

The October newsletter allows us to address several important and timely topics, which is crucial to share with the entire company team.

The hottest topic is the **skyrocketing prices of raw materials and energy**, requiring a prompt technical, productive, and commercial response to quickly get back on track.

A sign of confidence comes from the recent **Fair in Pordenone**, where, thanks to the success of the vaccination campaign, we breathed a fresh air of hope regarding overcoming pandemic limitations.

Finally, we boast an award that suits our company well: the "**Innovation and Resilience BPER Banca**" award recognises our ability to innovate even in challenging times.

“

The scent of the award should never mask the smell of risk.

Popular saying

NOVEMBER, 2021

New development opportunities on the wave of recovery!

The flu season is here, and this year, we can once again offer the free vaccine to all interested colleagues.

To promote our conductors in Europe and around the world (now that travel is possible with more freedom), our sales and technical teams have visited Germany and Egypt, achieve resounding interest and **development opportunities**.

“

*If you follow your star
You cannot fail to glorious harbour*

Dante Alighieri

DECEMBER, 2021

“Resilience” is the word of the year

We have reached the last newsletter of this year 2021, which, like the previous one, will be remembered for the Coronavirus pandemic. For this reason, I want to quote the wise words of the **President of the Republic, Sergio Mattarella**, in his greeting to the High Authorities of the State: ***"The year that is about to end has been a year of intense work. With clear priorities: the fight against the pandemic and the recovery of the country's economic and social life. We can draw an overall positive balance for having increased the protection of citizens in the face of the threat of the virus and for having set society back in motion. It has been the result of courageous choices, progress in science, conscientious behavior, widespread civic sense, and the result of a convergence between institutions and citizens.***

The pandemic still marks our time. It has caused pain, suffering, new poverty. But we have seen solidarity responses, talents and qualities have emerged, unexpressed qualities, innovative processes have accelerated... We are still called to prudence and responsibility. However, we have equipped ourselves with adequate tools to fight the virus. We no longer feel at the mercy of events... All this seemed to me an extraordinary sign of maturity and seriousness."

Just as the entire social body of our country has managed to find resources and energies to cope with the emergency, our large community at **De Angeli Prodotti** has also reacted with courage to the great difficulties and closes a year full of achievements and new challenges for the future.

“

It is better to light a small candle than to curse the darkness.

Confucio

2022

The year of large installations of ACCM, the multistrand carbon conductor

Conductor with multiple cores made of carbon fiber: De Angeli Prodotti did it!

In late June 2021, a power line in northeastern Italy underwent an upgrade campaign with the aim of **increasing capacity and reducing sag**.

What are sags in power transmission lines?

"Sag" is a geometric term that refers to the height of an arc (specifically, the one formed by a stretched cable). In practical terms, it indicates how much the cable "hangs" (due to its own weight) compared to a straight line.

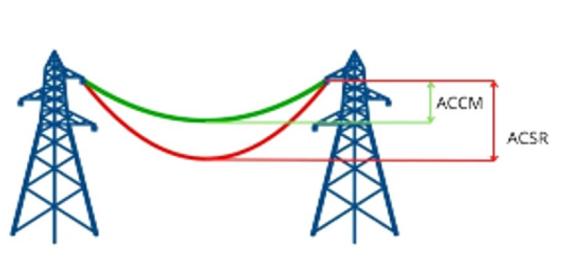


What are the advantages of reducing sags in power transmission lines?

One of the advantages of reducing sags is **the lowering of the electromagnetic field measured at ground level**. Especially in recent years, electromagnetic field values play a crucial role in the design and usability of telecommunication and transmission infrastructures. Not only infrastructures such as antennas or other radiofrequency systems are affected by this aspect.



In order to solve this type of problem, De Angeli Prodotti has developed a very lightweight conductor in which the structural function is performed by a composite core made of carbon fiber instead of more traditional stainless steel or aluminum-coated steel. A carbon core composed of 7 shaped elements has been used to provide flexibility and strength at the same time. De Angeli Prodotti has named this type of conductor "**ACCM**."



The significant reduction in the weight of the conductor has allowed an increase in the ground clearance (the distance between the phase and the ground). This has ensured a substantial reduction in the detected electromagnetic field.

A great success for the ACCM project on a very important line!

The line in question is almost **30 km long, with over 250 km of conductors, divided into 102 reels**, produced at our facility to equip the entire section. Given the importance and high degree of innovation of this project, training sessions to train the installation companies were conducted by our research and development department. The R&D team was also involved during the field installation procedures.

The laying of the last of the 102 drums was done a few months ago and was made possible by excellent work within our factory and also on site. The success of the ACCM project will allow the line to work at its best for the coming years.



READ THE NEWS ON OUR
WEBSITE
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JANUARY, 2022

A year that began uphill but with new pushes for big goals

The month of January 2022 begins with the same Covid difficulties with which 2021 ended: even more positive cases and quarantines, the need to comply with precautionary protocols and the novelty of the **vaccination obligation for the Over-50s**.

In this difficult situation, it is even more important to close ranks to fulfil customer orders, such as the **supply to the Swiss electricity grid Swissgrid**, which came to visit us to check on progress.

The growth of our company requires **new recruits**, and every Thursday evening we are recruiting to strengthen our team. As always, the invitation goes out to everyone to put forward trusted candidates to our HR department.

Continuous Improvement has made a stop at the **Sales Department for a new Kaizen site**, which has given a more modern and brighter face to the working environment.

“

Some people regard private enterprise as a predatory tiger to be shot. Others look on it as a cow they can milk. Not enough people see it as a healthy horse, pulling a sturdy wagon.

Winston Churchill

FEBRUARY, 2022

Let's warm up our engines... 2022 is already in full swing!

We are now deep into this new year 2022, amidst a thousand difficulties, but with great energy.

We have proudly presented to the market the **Web Configurator for our Special Drivers**: it is truly beautiful not only from a technical but also an aesthetic point of view, and will certainly be a tool that will positively differentiate us from our competitors.

After a couple of years of severe mobility restrictions due to Covid, we can finally travel with more freedom, and we have taken the opportunity to schedule **a full calendar of trade fairs around the world**.

Since in the competitive system in which we live it is essential for survival to always improve, the **Continuous Improvement Group** has been on the move, with an Agenda of projects and construction sites that **will involve our entire large team**.

“

He who works with his hands is a worker.

He who works with his hands and his head is a craftsman.

He who works with his hands and his head and his heart is an artist.

San Francesco D'Assisi

MARCH, 2022

The Ukraine crisis is closer than you think

This month's newsletter comes out while the **invasion of Ukraine** by Russia has been ongoing for several weeks. In addition to the enormous suffering of the Ukrainian population, the war has had a **great impact on the energy sector** in which our company operates.

In this newsletter we therefore address the difficulties associated with the out-of-control rise in the **cost of energy**, as well as the increased need for our country's **energy autonomy** and accelerated **ecological transition**.

On the business front, we start travelling again a few weeks ago and Maristella and Vittoria tell us about their **visit to the Dubai Trade Fair**.

“

The excess energy that arises from hyper-reaction in the face of a difficulty is what enables innovation!

Nassim Nicholas Taleb

APRIL, 2022

From stopping orders to opening new markets

We have now passed two months of war in Ukraine since the Russian invasion that began on 22 February, and the consequences are taking their toll on the Ukrainian population and also on the European economy.

Some of our products are now sold at prices that are below production costs, and we have had to ask our customers to interrupt some contracts if they are not willing to revise their prices. So many trade negotiations are ongoing and we will draw the conclusions in the coming months!

In the meantime, we are certainly not stopping, and we went to exhibit our products in Germany at the Ulm Trade Fair, a city on the Danube, situated between Baden-Württemberg and Bavaria, where we were very successful with our Litz conductors and special enamelled flat wires for the electric car.

Northern Europe is becoming an increasingly important market for our company: after much discussion, the TSO (Transmission System Operator) TenneT has finally approved us and we will be able to supply the Netherlands and Germany with our most innovative ACCM conductors and OPGWs.

“

In my family, the work ethic was taught to us by our parents.

My father used to say that it is the most important thing in a person's life.

Mario Draghi

MAY, 2022

Good news from Europe and the (energy) world!

We are finally moving more and more month by month in search of new opportunities.

Vittoria went to New Orleans in the USA to study the American power grid market for our Carbon Core conductors, while with a large group of colleagues we exhibited our electromechanical products at the **Berlin Trade Fair**.

In the meantime, three major customers such as **Elia, SGB-Smit and Siemens came to us for important audits**, for which we prepared ourselves properly with the support of the entire team and made a good impression!

“

The future belongs to those who prepare for it today.

Malcolm X

JUNE, 2022

From schools: the basis for an increasingly global company

As you know, we focus on young people and the most modern products to face the future with optimism. This is why we hosted a group of university students from all over Italy, to show how industry in our country follows the most advanced organisational models, based on collaboration extended to all and continuous improvement, with the noble aim of actively contributing to the Ecological Transition.

We also went to visit the ENAIP in Conselve, to testify our support for local schools that train the new recruits for the industrial development of our country.

Finally, we attended the big presentation of our first digitised product, the ACCS-Sens to the major European Electricity Networks in Belgium: and this is just the beginning!

“

The competitiveness of a country does not start in factories or research laboratories, but in schools.

Henry Ford

JULY, 2022

One possible direction towards sustainability and ecological transition

The sweltering summer heat reminds us daily of the importance of our mission: to contribute to the **ecological transition** to encourage **decarbonisation** and mitigate climate change.

It is therefore with pleasure that we highlight in this newsletter the graduation of **Giulia Bondesan**, who presented the case of De Angeli Prodotti with a **thesis on the transition to electric power in the automotive sector**, one of the strategic development pillars of our company for the coming years.

At the **Wire & Tube trade fair in Dusseldorf**, we discussed with our customers and suppliers precisely this industrial path of **sustainability**, which includes new technologically advanced products, also digitised with the use of **fibre optics**, and new investments in machinery and equipment.

“

People think that the history is long-lasting, but the history, in reality, appears before you suddenly.

Philip Roth

AUGUST, 2022

**Skyrocketing energy prices?
We respond with innovation and sustainability!**

This month of August raised the issue of **energy costs** in dramatic terms. The **price of gas** has skyrocketed from the already very high level of €180 in July to over **€300**, creating an emergency that puts the entire Italian and European industrial system at risk. New urgent measures to support the economy are urgently needed to address the situation!

Regarding **Innovation, Digitalization and Internationalization**, we received a visit from **CEMIG**, an **important Brazilian Electricity Network**, with which we intend to create a Pilot Line with our most advanced Smart Conductors.

The **outcome of the SA8000 audit** certifies our **commitment to Social Responsibility**.

“

*Whatever the price, only buy well
what is necessary.*

Cicerone

SEPTEMBER, 2022

We need everyone to realise our strategy

We are in the midst of a **prohibitive situation** between the **energy crisis**, the very serious developments in the **war in Ukraine**, the laborious implementation of the **PNRR**, the inflationary spiral, but we are not discouraged and **we continue to implement our strategy with patience and energy**.

First of all, it is worth underlining the impact, which went beyond the most optimistic expectations, of our **presentation in Paris at Cigré** of our most advanced and digitalised conductor: the **Smart Conductor**. We have collected **countless expressions of interest on all continents**, demonstrating that the concept goes in the direction of the needs of electricity grids around the world. It will be up to us **to make this dream a concrete realisation** with the commitment of the entire technical and commercial team. The HR Office organised the first **company Open Day**, giving job opportunities to willing young people! By the way, we also take this opportunity in order to bring to everyone's attention that our development plan involves the **hiring of 100 (one hundred!) new colleagues**: does **anyone want to help us find them?**

“

*The rise is slow.
The ruin is rapid.*

Seneca

OCTOBER, 2022

Continuous improvement and training help us grow

A dynamic and growing organisation like ours wants to cultivate the skills of its collaborators, improve the organization and production processes, and provide technologically advanced products to important customers.

On the training front, **Soft Skills courses** (i.e. problem solving, communication, flexibility, etc.) are therefore continuing **for our Talents**, groups of willing colleagues who are gradually moving towards increasingly difficult jobs.

On the **Continuous Improvement** front, Francesco Gallocchio is coordinating **12 Kaizen sites** and **14 A3 groups**, whose progress was presented on 20 October to a large community of colleagues in the "Team Spirit" room.

Finally, in this month of October, installations of transmission conductors characterised by our advanced **sandblasting and coloring Surface Treatments** are underway (at **SwissGrid in Switzerland** and **APG in Austria**).

“

*Poor execution can make a good decision
look bad*

Italo Calvino

NOVEMBER, 2022

Passed with full marks! But there is always room for improvement

November was a month characterised by **important audits**. For the Energy Transmission Ropes sector, the engineers from **Statnett**, the Norwegian Electricity Grid, came to visit us, for which we have for some time become a strategic supplier of large conductors for the crossing of fjords. **Result? Promoted**, with **sincere compliments** and with the suggestion that **we should strive to keep the production lines running more** to be more competitive.

For the Winding Conductors sector we received a visit from **Hitachi** (which recently purchased the transformer sector of ABB, including Monselice). **Result? Promoted**, with **compliments for our modern organisation** and a **request to bring more order** to the factory.

Our Transmission Conductors are also at home **in Switzerland**, and **the inauguration of the large Cham-Chip line** is proof of how important they are for the Ecological Transition. If you can see the presentation video you will be happy to have contributed to this wonderful infrastructure.

“

Everyone takes the limits of their vision for the limits of the world

Arthur Schopenhauer

DECEMBER, 2022

A difficult year worldwide!

We have arrived at the December 2022 newsletter, a year lived dangerously around the world, as dramatic geopolitical events have accumulated, such as **the Russian war of aggression against Ukraine** starting on 24 February, **the resulting energy crisis**, which has brought the price of gas in Europe up to six times above the stable level of previous years, and **the continuing Covid 19 pandemic crisis**, which gradually lost its health threat thanks to vaccination campaigns, but maintained a **very significant impact on industry production capacities** affected by virus positivity and quarantines.

The disruption of global supply chains, linked to the container crisis, resulted in the **unavailability of some important components of the industrial value system**, including electronic chips from the Far East and the most important raw materials for production processes, **undermining confidence in the irreversibility of globalisation and China's role as the world's factory**, and encouraging the building of **more secure supply relationships at continental level**.

With the passing of the months, the tensions on the energy and input markets have generated an **extraordinary inflationary dynamic**, such as has not been seen since the 1980s, and have caused a **restrictive reaction on the part of the major Central Banks**, leading to a **cool-down of the global economy and growth forecasts**, to the point of foreshadowing a **possible recession scenario**.

In other words, a **perfect storm** through which to navigate while keeping a straight tiller.

“

The plant that stops growing dies: it is true in gardens, it is true in life, it is true in finance and business.

Alessandro Benetton

2023

The year of Smart-Conductors and E-mobility



De Angeli Prodotti presents the future of conductors: Smart Conductor

At the end of June 2021, a line in the north-east of Italy was the subject of an upgrading campaign with the aim of **increasing the capacity and reducing the sags**.

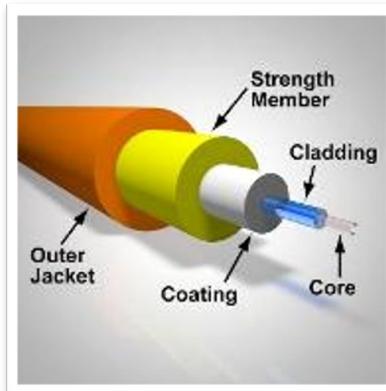
As usual, De Angeli Prodotti participated in the **CIGRE trade fair in Paris**, Europe's leading trade fair for overhead power line conductors. Here, our company has always presented highly innovative and ambitious products, but this time it left everyone stunned. The future of overhead power lines is the **Smart Conductor**.

What is a Smart Conductor?

The Smart Conductor is an **overhead power line conductor** for which a wire is replaced with a sensitive wire, equipped with optical fibre.

What is an optical fibre?

Optical fibres are filaments of glassy or polymeric materials, which are made in such a way that they can conduct light inside them. In other words, they allow an electromagnetic field of a sufficiently high frequency (usually near infrared) to be conveyed and guided within them with extremely limited losses. A rigorous study of the physics of optical fibres requires quantum optics concepts. Using a classical optics comparison, a total internal reflection phenomenon occurs in optical fibres, whereby the discontinuity of the refractive index between the core (higher refractive index) and cover (lower refractive index) materials traps the light radiation as long as it maintains a sufficiently low angle, i.e. as long as the fibre does not make too abrupt bends.



Why integrate an optical fibre inside a high-voltage conductor?

The purpose of the optical fibre within the **Smart Conductor** is to provide **continuous, real-time information** on the operating conditions of the line throughout its lifetime, when interrogated by means of advanced equipment. In particular, it is possible to monitor:

1. Breaks or faults;
2. Temperatures;
3. Deformations;
4. Vibrations and acoustic analysis (future developments).



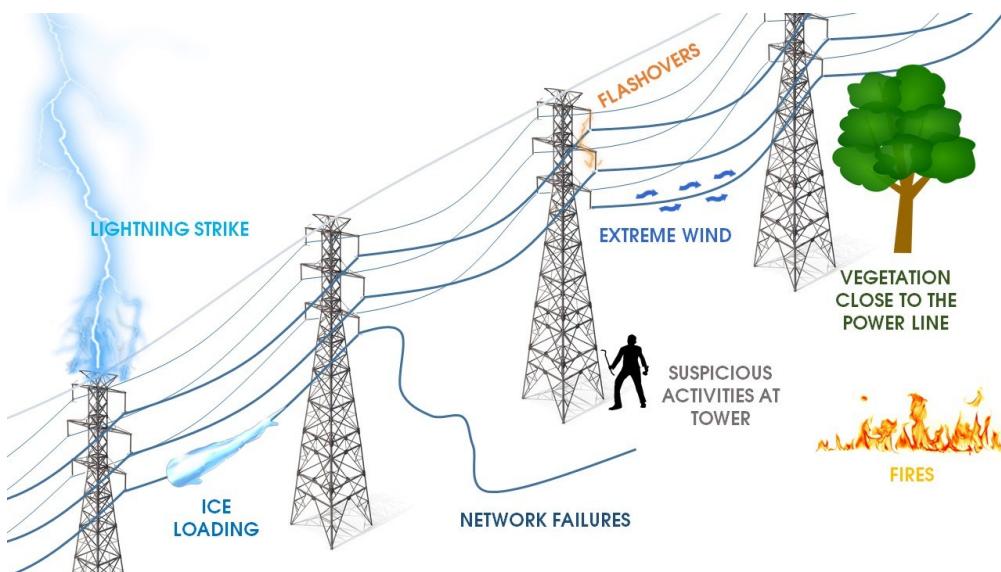
What real time information can be obtained with Smart Conductors?

- **Temperature monitoring** is of crucial relevance as, in this way, very cautious safety limits would not be required as with conventional conductors, increasing the transport capacity for the same conductor characteristics. This will play an increasingly important role in the electricity system as electricity from non-storageable priority dispatch sources such as renewables increases.

Many of the renewable sources do not have storage devices, so the energy produced that cannot be transported is lost. The use of fibre optics therefore makes it possible to considerably reduce this waste with obvious advantages from an economic and environmental point of view. Thus, this technology is a further step towards the increasing use of energy from renewable sources at the expense of fossil fuels.



- **Continuous monitoring of the temperature** and therefore, as explained above, optimisation of the conductor itself would allow a **considerable increase in the current flow rate** for the same conductor without the need to intervene with infrastructural works, which would be very costly in terms of economic and time resources and harmful from an environmental point of view.
- The **evaluation of deformations** during all operating conditions, on the other hand, is crucial in terms of safety. By evaluating this aspect, parameters such as ground clearance (height of the conductor above the ground) and deflection can be analysed constantly. In particular, the former is standardised for safety reasons and therefore, even in quite exceptional situations, it is possible to preventively assess possible risk situations
- Fibre optics also make it possible **to detect the position of any breaks very precisely**, facilitating maintenance operations in the event of this type of damage. It is important to emphasise that constant monitoring of the line allows **targeted** and preventive **maintenance** to be carried out, considerably increasing the safety of the plant and operators and clearly reducing costs.



Some examples of events that can be monitored with Smart Conductors

What are the benefits of Smart Conductors?

Thanks to real time information, targeted and preventive maintenance of the power supply network makes it possible to reduce, if not eliminate, possible disruptions due to this type of activity.

As mentioned earlier, this type of conductor is **fully compatible with the existing infrastructure. This makes it possible to minimise upgrade costs as no infrastructure work is required** (75% of the total cost of the installation saved). Avoiding the creation of new infrastructure also makes it possible to significantly reduce environmental and landscape impact as well as land consumption as a non-renewable resource.



[READ THE NEWS ON OUR WEBSITE](#)

[SCAN THE QR CODE!](#)



IATF16949 certification: an important achievement has been reached

We are extremely proud to announce that we have achieved **IATF16949 certification**, which demonstrates the commitment and quality of our work in the **automotive** sector. However, this is not the end of our journey, but only the beginning.

We will continue to invest in our **E-mobility team** and our **technological know-how**, with the aim of increasing the supply of **Magnet wires** to the industry.



We expand into the E-mobility market: clean energy at the service of sustainable mobility

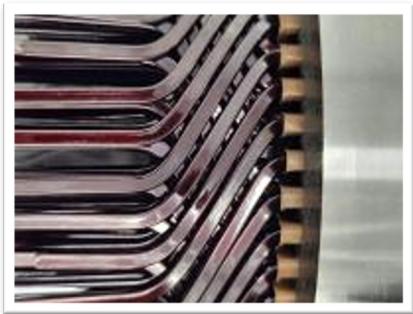
De Angeli Prodotti is at the forefront of the **Green Revolution**: 30 years of experience in the Energy sector have allowed us to develop **Magnet Wires** suitable for all types of electric machines, capable of improving their reliability and performance. **Motors, transformers, generators, high-frequency** applications! A very high-tech product portfolio, capable of meeting future challenges in the world of energy.

The **Electric Mobility** challenge is one of the cornerstones of the energy transition: it represents an opportunity to reduce fossil fuel dependency and promotes the development of innovative and sustainable technologies. From these assumptions a few years ago came our decision to include the **automotive market** and specifically **E-mobility** in our business model.

A journey into e-Mobility started in 2018

In 2018, a **dedicated Automotive team** was established, made up of various parts of the company: R&D and Quality engineers, Production Technologists and Project Managers.

The very challenging **quality standards** required by **Tier 1/OEMs** have allowed us to grow in countless aspects:



- we have expanded our know-how on **partial discharges** by setting up a dedicated laboratory;
- our enamels are now evenly distributed over the entire flat section;
- and our process is perfectly set up for subsequent **hairpin** forming.

As a result of our efforts, we currently have **5 fully dedicated enamelling lines** for two major **Tier 1s** in the **E-mobility sector**, and the overall plan is to grow to **16 enamelling lines**.

Our commitment to **environmental sustainability** and **decarbonisation** is increasingly at the core of our business and we look to the future with enthusiasm and determination.



READ THE NEWS ON OUR
WEBSITE
SCAN THE QR CODE!



JANUARY, 2023

The year begins with many good purposes for investment and growth

The year 2023 begins and it is therefore time for good intentions, which we in the company call "**fioretti**".

The year 2022 finally allowed us a moment of relax so that we could congratulate each other in presence, and celebrate among other things the 85 colleagues (true pillars of our organisation) who have been with us since 1995! It was touching to thank these veterans, without whom the company would certainly never have achieved the results it can boast.

The year 2023 is a year in which a large staff development is planned (100 new colleagues) and in the newly acquired halls we will install new equipment and develop very advanced technologies. We are counting on the contribution of IDEAngeli so that no idea goes to waste and everyone can showcase their talents.

“

*If you want to go fast, go alone.
If you want to go far, go together.*

African proverb

FEBRUARY, 2023

Young people and new technologies: the foundations for our future!

As you know, our company **focuses on young people**, with respect to whom it assumes social responsibility, believes in the **Continuous Improvement of its organisation**, and wants to fully realise its **idea of Quality**.

This is why we have joined an important project called ***Mestieri e Futuro*** (Professions and the Future), which aims **to introduce young middle school students to the World of Manufacturing**, providing an opportunity for young people and their families to become more aware of the job opportunities offered by the Industrial Sector, which is the economic locomotive of our country.

The **construction site of the New Sage X3 Information System** has also officially started, which over the course of a year and a half of teamwork will take us towards a modernisation of operational and information flows.

The growth of our technologies and the increasingly demanding expectations of our customers are behind the recent acquisition of a very modern **Optical Comparator**, which will help us **improve the Quality of our production tools and products**.

“

Keizoku wa chikara nari

Continuity is power

Japanese proverb

MARCH, 2023

More and more sustainable, for the environment and for people!

In March, the work on the **new car park** began, we posted a **new section** on the company website **dedicated to Sustainability**, and we reflected on the recently completed **SA 8000:2014 Re-certification Audit: Certification on Social Responsibility**.

The new car park will be ready within a month, it will increase the number of parking spaces available, closer to the company entrance, and it will free up space to improve the storage of large rope drums.

With regard to **economic, social and environmental sustainability**, our company is progressively directing more attention and resources: it will be increasingly important to implement concrete actions in this direction, and to communicate them correctly to all parties involved, such as customers, institutions, employees and all those who come into contact with our company.

Part of this path is the **Certification on Social Responsibility**, which allows us to better focus and measure our attention to the respect of rights, the environment and health and safety.

“

Non s'ha da vivere scontenti, ché sarebbe pochezza d'animo, né soddisfatti, ché sarebbe stoltezza

(One should not live dissatisfied, as that would be a lack of soul, nor satisfied, as that would be foolishness)

Baltasar Gracián

APRIL, 2023

New markets, training and safety: straight towards the future!

In order to make good cables, you have to be a team player with so-called **Soft Skills**, which is why an increasing group of colleagues is taking courses to learn how to work together better.

An important step in April was also **extended safety training** through a visit to the **Dojo**, our famous organisational improvement gym.

“

Avoid doing what you don't know, but learn all that is needed

Pitagora (Greek Philosopher)

MAY, 2023

The Ecological Transition passes through our company!

The month of May was characterised by many business ventures for the Electrical Winding Wires sector.

We went to **Slovenia to the Mahle Group** and to **Berlin to the CWIEME trade fair**, the largest in the industry. The message we take home is that **the Ecological Transition passes through the electrification of the energy world**: this means a **great opportunity** to be seized by our company, which has a **unique product portfolio** in our sector, and can contribute substantially to this extraordinary revolution. That is why we have to get better **organised**, continue our robust **investment policy**, and bring in many **new colleagues** to help us achieve our growth targets.

Our colleague Mrs Maschio even went on **RTL Radio** to promote our **recruitment plan**!

“

You are never too young to make a difference

Greta Thunberg

JUNE, 2023

We have clear IDEAngeli for the future!

We have reached the halfway point of 2023 and this newsletter shows that we have not lost the momentum of the beginning of the year:

- we went to **present our company at high schools** to young people who are about to graduate, to explain to them that a large industrial country like Italy needs their energy;
- we exhibited our innovations at the **CIRED (International Conference & Exhibition on Electricity Distribution)** in Rome **from 12 to 15 June**, including the ultra-modern Smart Conductor, which transforms our conductors into real distributed sensors, capable of monitoring the Electrical Transmission Networks;
- we continued to **deploy the many IDEAngeli** models proposed by our best talents **in the company**, such as Nicusor Zaharia who conceived an intelligent system to improve our Master Stranding Machine.

“

Avoiding mistakes is a petty ideal: the important thing is to learn from our mistakes.

Karl Popper

JULY, 2023

Accounts are closed and new horizons open

Perhaps isn't it public knowledge that **July** is a very important month for our company, because **our annual accounts are closing** and therefore we need to make sure that everything is concluded positively by the 31st, which for De Angeli Prodotti is a little like New Year's Eve for all of us.

In this end-of-year Newsletter we celebrate:

- the **transfer of the Wrapping department** to the new large ex-MTA warehouse;
- the company's decision to establish **Scholarships** to support parents who have children studying under their care;
- and the forthcoming completion of the **new car park at the roundabout**, which will be available upon **returning from holidays on 21 August**.

“

A politician looks to the next elections.

A statesman looks to future generations.

Alcide De Gasperi

AUGUST, 2023

With pride and courage towards new records!

August is a month of regeneration in a broad sense for our company: the Production and Office teams take a couple of weeks off, and the Maintenance team takes the opportunity to tidy up the systems properly.

In any case, there is no shortage of news even in this very hot August:

- We have completed the **enormous 40-ton drums for the Fjord Crossing in Norway**, which make us proud of the courage and technical mastery put in place;
- We took the first steps in the field of **Artificial Intelligence (AI)** thanks to Nicola Lazzaro, who took a good course and began to explain to us how we could use AI in the company;
- Fabio Bagatella invites us all to **Conselve Summer Prà** to eat a sandwich on placemats sponsored by De Angeli Prodotti which advertises our **great Recruitment Plan**.

“

If you are not ashamed of the first version of your product, you launched it too late.

Reid Hoffman (LinkedIn Co-Founder)

SEPTEMBER, 2023

Team spirit helps achieve great results!

The month of September has seen us engaged in wide-ranging initiatives, organised for the coming months, not only in the business field, to present our company to the public and to bring the team together.

This is how the **First De Angeli Prodotti Tennis Competition** was born, to be held on **14 and 15 October** at the **Bagnoli di Sopra Tennis Club**.

In **November**, on **25 and 26**, we will open the doors of the factory **to family members and outsiders interested** in getting to know our company, as part of an initiative called: **Open Factory – industrial tourism and manufacturing culture**.

A big event in September was also the **visit of a large delegation from RFI**, the Italian Railways, which as you know we have been supplying for decades, and who for the first time travelled from Rome to visit us: perhaps because they need so much copper in the coming years?

“

I am happy when a small thing progresses.

Marco Aurelio

OCTOBER, 2023

Investment and continuous improvement reward teamwork

October marks a key stage in our company's development plan. We have taken over the OMB hall and are already turning it inside out, in order to build a state-of-the-art rope factory as quickly as possible, where we will produce our carbon conductors from now on, and Smart Conductors in the future. The Continuous Improvement Plan has been defined and is in full swing: each of us is certainly part of some working group, and will be able to contribute our ideas and experience to make the company more modern and competitive. The company's Tennis Competition proved to be a good opportunity to get together, and we will take this as a starting point for new initiatives involving even more colleagues.

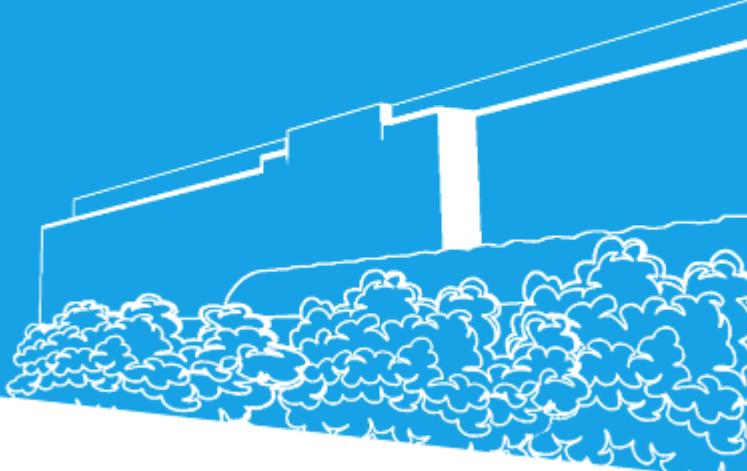
“

If you raise a wall, think about what is left outside

Italo Calvino

WE ARE

De Angeli Prodotti!



A company made of people with a common goal

Now that we have "opened the heart" of De Angeli Prodotti, we discover a place where people and stories intertwine to create a fascinating storyline of commitment and passion. Through this series of testimonials, we will introduce you to the faces of those who work tirelessly behind the scenes, carrying out our mission **to achieve the ecological transition with cutting-edge products**.

Each testimonial is an open window into unique experiences, driven by deep values that animate our company DNA. **Quality** is our compass, **innovation** is our creative drive, **resilience** is our strength in times of challenge, **balance** is the key to a sustainable future, and **team spirit** is the cement that holds our community of talent together.

These **testimonies** are a reflection of an ongoing commitment that has been passed down through the years, a succession of individuals united by the same vision. Through challenges and victories, we have cultivated a corporate culture based on collaboration and shared core values.

We are excited to share these stories with you, because we believe that **behind every successful product there are extraordinary people**.



The human side is often underestimated but working as a team allowed us to get to know each other and to create a positive and satisfying working environment.

Administration Office

Mattia Bellan
(Mechanical Maintenance)

I joined De Angeli Prodotti's workshop when I was 18 years old and now, at 24, I am the reference point for lathe operators.

I have also tried other work experiences, but here at De Angeli Prodotti we are like family.



Giuseppe Caruso
(Drawing Department)

I have been working in wire drawing since 1990 and over the time I was lucky enough to work on many plants.

I have been in the rolling mill for 20 years and, with passion and patience, I teach our new colleagues the best practices for working safely and with quality!

I was one of the first men to teach this job to female colleagues, what a satisfaction!



Lorenzo Bissacco
(Wrapping Department)

I have been working at De Angeli Prodotti for 16 years and I am the Wrapping trainer.

It is a pleasure to teach the secrets of this trade and it is a source of pride for me to see new colleagues grow alongside me.



Melissa Drago

(Wrapping Department)

I started working at De Angeli Prodotti two years ago and immediately got into Wrapping.

I am glad about the trust my colleagues have placed in me, I am looking forward to achieving new results together!



GOLD EMPLOYEE!

Stefano Bissacco

(Stranding Department)

I was hired in 1989 and since then I have seen everything! I specialise in repairing conductors to give customers the highest quality.

I am nicknamed "La Leggenda" (The Legend) by my colleagues.



Nicola Lazzaro

(IT Department)

I have been working at De Angeli Prodotti for 12 years (it was my first job!). With my colleagues in IT, we ensure that the entire IT structure works perfectly, to support the work of our colleagues in the offices and in production.

Over the years I have specialised in marketing and now all graphics and internal or external communication go through my keyboard, including this fantastic book!



**Leonardo Vendramin
(Electrician)**

I joined De Angeli Prodotti immediately after graduating in Electronics and Electrical Technology and immediately joined the team of electricians. I had no industrial experience, but now I am able to repair the various systems in the company independently!



**Greta Tassetto
(Drawing Department)**

I have only been at De Angeli Prodotti for a year and I already know how to run a rolling plant by myself.

My trainers had a lot of patience with me, but finally now we can have a lot of satisfaction together!



**Mereu Mirela
(Stranding Department)**

I have been working in the Stranding Department for less than a year and I have cleared away the idea that women could not work in the factory.

Now I run a plant by myself to produce the copper conductors used for the railways.

I thank my trainers, if I am independent today it is because of them!



Nataliya Prin

(Litz)

Before coming here, I had several jobs but I wanted a solid place organised in shifts to better manage my family. De Angeli Prodotti is just right for me! I have been part of the team since February 2021 and I was fascinated from the start by the Litz cables, real jewels of technology!



Mauro Tegani and Marco Curtarello

(Stranding Department)

We are young but already have a lot of experience in the rope-making industry! We like complicated productions and innovative conductors to be an active part of the company's growth.



Michele Rinaldi

(Enamelling Department)

I have been working at De Angeli Prodotti for 15 years. I will always be grateful to this company because it has ensured me being able to support and grow my family by always and punctually repaying all the efforts and sacrifices I have made. Even in the most difficult times, or during COVID, I have never been afraid to leave my loved ones in trouble because I know that De Angeli Prodotti always responds "Present". This is really not at all taken for granted nowadays!



Victoria Casu
(Enamelling Department)

I have been working at De Angeli Prodotti for a year. I was one of the first women in the enamelling factory and I can honestly say from the bottom of my heart that I am very happy about everything, both the work and the colleagues with whom I get on very well.

I always say to young people: "Come to De Angeli Prodotti and stay here, it's good!"



Nicolò Barbierato
(Litz)

After working in my family's bar, I started my journey at De Angeli Prodotti in 2009. I had the good fortune to work in various departments of the company and I taught tricks and tricks of the trade to many colleagues.

For 12 years I worked in the Transposed Cable department and produced the cables that are inside the power transformers, today I work in the Litz department and from my hands take shape the cables that make up the charging columns of electric cars!



Lorenzo Lazzari and Bejan Bogdan
(CTC)

We have been working together for 10 years and we have a winning chemistry, now just one look is enough to understand each other!



**Andrea Gian
(Sales Department Italy)**

I started as a worker in this factory, but with the support of the company, I had the opportunity to grow.

Now I am proud to represent our products throughout Italy.



**Dennis Ganguzzi
(Programmer)**

I have been working at De Angeli since 2017 when I was 20 years old, the company has given me the opportunity to grow continuously.

I started in the Stranding department as machine operator and after a few years thanks to a growth proposal I became a department programmer. Today, thanks to the experience gained over time, I find myself as a programmer for three departments.

This path has changed me as a person and also given me more confidence.



**Francesco Zemignan
(Sales Manager)**

I came here more than 30 years ago as a Quality Control Officer and now I am the Sales Manager, this company has given me the opportunity to grow both professionally and as a person.



**Giuliana Latini
(Sales Department)**

I have been here for 36 years, and I never get tired of learning and growing.

The company has always been by my side, offering continuous training and development opportunities.



**Vasil Matija and Simone Marchesin
(Drawing Department)**

I have been working at De Angeli Prodotti since 2008, joining the drawing factory first as an operator and then as a shift supervisor. I had a brief period working abroad, but De Angeli Prodotti has always remained in my heart... and here we are again!



**Simone Forin
(Stranding Department)**

After a life at De Angeli Prodotti I am now enjoying my retirement by working for the company as a Trainer of new hires at Stranding Department!

What a satisfaction to see them grow and follow the best working practices! The future also passes through me!

GOLD EMPLOYEE!



**Giacomo Sarti
(Plant Manager)**

I joined De Angeli Prodotti as an intern in 2013. At the beginning I was in the Technical Department and I was in charge of the development of the carbon conductor then I took over the plant management and now here I am!

I love planes and space, and I dream of making the first De Angeli Prodotti wire to be installed on the Moon... we are in the right way and together we will succeed!



**Gianluca Bertelli
(Head of Enamelling Department)**

I have been working at De Angeli Prodotti for 4 and a half years. I started in the Technical Dept. just after graduating and, after two years living between the office and the Litz department, I joined the great team at Enamelling Dept.

Here the greatest joy is to walk through the gate every day with a smile on my face, well aware that there will always be new tough challenges waiting for me, but sure that I will not be alone, with a solid and united team always ready to have my back. The most surprising thing I have had the luck to experience, then, is that here the classic phrase "The company is relying on young people" is not just rhetoric but is a solid and fundamental point of the exponential growth we are experiencing as a company in recent years.

When I joined De Angeli Prodotti it seemed huge to me, now it is almost twice as big.



**Davide Peroni
(R&D Manager)**

I have been working in the Engineering Department for 14 years and innovation has always been a central part of my work.

It is always exciting to see the birth of a new product, which from a sheet of



**Vittoria Bottin
(Export Sales Department)**

joined the company 5 years ago, I did not know the industry but I knew English well, my colleagues and the Management trusted me and thanks to perseverance and dedication I now represent the products abroad, it is, and continues to be, an incredible adventure!



Chiara Mancin, Anna Trovò and Giulia Ceravolo

(Personnel and HR Department)

Having all joined in the last three years, we feel part of the generational change at De Angeli Prodotti. Thanks to the values that distinguish our company, we are able to face and manage the different needs of every day, always with a smile!



**AND EVERYONE
ELSE!**

**We are a team of
500 people!**





Andrea Roncon, Stefano Moretto, Roberto Lodo, Goran Barzilovic:
the Enamelling Company



Andry Sihodnik, Cristian Zahovello, Francesco Biancato:
the rugby team



Leonid Potapenko, Ridvan Kuci, Souleymane Sabaha:
many well-integrated cultures and nationalities
working together!



Anna Maria Pulze: the first woman on the forklift!



Giancarlo Masuero and Giorgia Bondesan:
with the brand new die-cutting machine



Milo Tassinari, Sergio Casumaro, Giuseppe Vianello:
the Orange Purification Team



Pierpaolo Trovò: close to retirement!



Arnaldo Brigantin: also...
close to retirement!



Alessio Borgato, Paolo Penon, Claudia Piovan, Mattia Cavallini:
the shipping warehouse team



Luca Mora, Davide Sattin, Andrea Polverigiani, Angelo Moretto:
heart, soul and body of De Angeli Prodotti



Vittoria Bottin: flying in a helicopter over the Norwegian fjords!



Mattia Casotto, Luca Mora, Vittoria Bottin and Davide Peroni: our technical and sales team at CIRED in Rome to present our innovative conductors!



Simone Temporin, Ezio Fantinato, Nicola Lazzaro, Michele Pellegrini: the CED brains with "The Computer". If switching off and on again is not enough... call us!



Arianna Giraldin, Lamberto Cuoghi, Michele Fantin, Davide Peroni, Federico Corradin, Nicola Piovanello, Alessandro Celadin, Alberto Conte, Paolo Pilotto, Debora Mimo and Mattia Casotto: our R&D Technical Department in full force!



Mery Bonato, Beatrice Capuzzo, Valentina Bullo, Daniele Zamborlin (Purchasing Department): The beauty of procurement is that every time you buy, you learn something about someone else's work. And this enriches you in 360 degrees!



Vittoria Bottin: with the record-breaking conductor installed in Norway



Luca Mora: the President with the giant Statnett drum

“

E quindi uscimmo a riveder le stelle.

Dante Alighieri

(Divina Commedia, Canto I, XXXIV, 139)

De Angeli Prodotti is at the forefront of a green revolution to save the Planet.

Energy transition helps decarbonization, requested worldwide to mitigate climate change, involves substantial investments in renewable energy, and poses the challenge of electric mobility.

Connection of multiple intermittent energy sources requires a more integrated, secure and flexible power grid.

Digitalization is an enabling and pervasive technology.

All above while in developing countries, a growing share of population has access to electricity!



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