



SUSTAINABILITY
AND ANTI-THEFT INNOVATION



SUSTAINABLE PERFORMANCE FOR
LOW-IMPACT TRANSPORTATION

Our commitment to a **sustainable energy future** is embodied in our conductors, engineered to support low-impact, **high-performance** transportation systems. Through advanced technologies and eco-friendly materials, we offer products that reduce energy loss and extend the operational life of systems, playing a key role in the **energy transition**.

INNOVATIVE SOLUTIONS FOR
ENHANCED ENERGY EFFICIENCY

Rail transport is essential for sustainable mobility, and we develop conductors that meet the challenges of today and tomorrow, ensuring **reliability with a reduced environmental impact**. Our approach to the energy transition brings innovative solutions that enhance energy efficiency and support our clients' green initiatives.



DE ANGELI PRODOTTI S.r.l.
Viale dell'Industria, 1
35023 Bagnoli di Sopra - Padova - **Italy**
tel 0039 049 9599111 - fax 0039 049 5380673
info@deangeliprodotti.com



www.deangeliprodotti.com

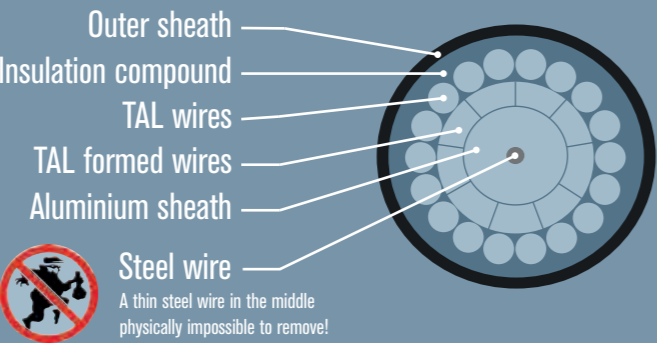


GREEN
SOLUTIONS
Green copper
Certification
Sustainability
EPD
Ecovadis



SAY GOODBYE TO THEFT!

A conductor consisting mainly of aluminium with a thin steel wire in the centre, which makes theft completely unnecessary as it is **bimetallic** and therefore cannot be remelted. This innovative solution makes it possible to eliminate the phenomenon of copper theft in railway networks, which are at the root of heavy delays and disruptions for travelers and damages to infrastructure managers.



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RAILWAYS APPLICATIONS

DRIVING INNOVATION:
SUSTAINABLE CONDUCTORS
FOR A GREENER RAILWAY

OUR VISION AS LEADING ACTORS
IN GREEN REVOLUTION

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!

E-MOBILITY RAILS

Rail transport is one of the most sustainable mobility solutions, thanks to its significantly lower emissions and higher energy efficiency compared to other modes of transport. Across Europe, a major electrification process is underway, driving the shift toward **greener infrastructure**. We are proud to support this transition by providing high-quality copper products essential for building a **cleaner and more sustainable future**. Our commitment to innovation and sustainability ensures that our solutions meet the evolving needs of modern rail systems.

40 YEARS OF EXPERIENCE MADE
OUR QUALITY THE BEST







Our company has been a key player in the Italian and European markets for over 40 years, offering guaranteed **quality and reliability**. We rely on a state-of-the-art, **well-equipped laboratory** and highly skilled personnel to ensure the highest quality standards.
We have always been at the forefront of developing **innovative solutions** in collaboration with our customers to drive the technological advancement of catenary products. We pride ourselves on **collaborations with the leading European players** in the sector and, historically, with RFI in Italy.



CONTACT WIRES

The European specifications **EN 50149** list all the standards (shapes, sections, alloys, etc.) used in Europe, which De Angeli Prodotti is able to comply with without limitations of form (bottom **flat** and **circular**) section (from 80 mm² to 150 mm²) and material (**Cu-Etp**, **Cu-Ag**, **Cu-Mg** and **Cu-Sn**).

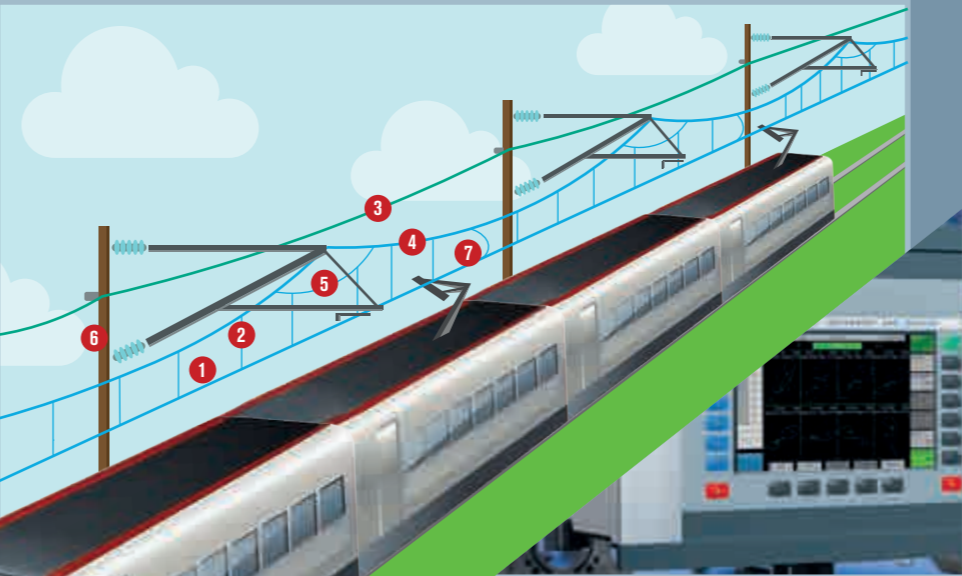
The complete range of products allows to meet the needs of contractors and utilities in all the rail sectors: tramways, metros, conventional and high-speed railway lines.

CUSTOMIZABLE SHAPES AND ALLOYS FOR ALL TYPE OF APPLICATIONS ACCORDING TO EN 50149					
AC	AC-80	AC-100	AC-107	AC-120	AC-150
BC	-	BC-100	BC-107	BC-120	BC-150
BF	-	BF-100	BF-107	BF-120	BF-150
CuEtp	CuAg 0,1	CuSn 0,2	CuMg 0,2		
					

COMPLETE PRODUCTS
RANGE FOR RAILWAY
CATENARIES

With over 85 years of expertise in wire production, De Angeli Prodotti delivers innovative, high-quality solutions for railway electrification projects, from urban to cross-border and conventional to high-speed lines.

- 1 Contact wire
- 2 Dropper
- 3 Feeder
- 4 Messenger wire
- 5 Stitch wire
- 6 Earthing wire
- 7 Jumper



EDDY CURRENT
TESTING SYSTEM

Our laboratory uses this non-destructive method that allows **real-time in-line verification** of the contact wire during production. Inducing **eddy currents** into material through electromagnetic coils, the system detects surface and subsurface defects, such as cracks or inclusions, by analyzing disruptions in the current flow. This ensures **continuous monitoring of the wire's integrity**.

WE BRING EXTENSIVE
MANUFACTURING EXPERIENCE
AND A STRONG COMMITMENT
TO INNOVATION

MESSENGER WIRE

The **messenger wire** is a copper or copper-alloy cable for railway electrification, supporting the contact wire with high strength, optimal conductivity, and durability. We use advanced systems to produce high-capacity, extra-long copper conductors for efficient installation. Our **Cu-Mg conductors**, combining excellent conductivity and mechanical strength, are ideal for **high-speed rail**. Standard and custom designs are available to meet customer needs.

Reference standards **DIN 48201**



Example:
Cu-Etp messenger wire
19 x 2.80 mm²



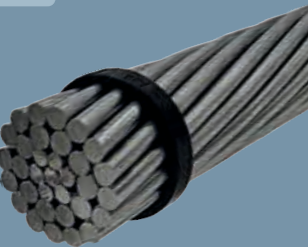
FEEDER WIRE

Our company specializes in the production of all typical **catenary conductors** made from aluminum and steel, including feeder, ground wires and optical ground wire. With our expertise and advanced technologies, we provide reliable, high-quality solutions to ensure the efficiency and safety of **railway systems**. We manufacture both standard conductors and custom solutions tailored to specific customer needs.

Reference standards **EN 50182**



Example:
Feeder ACSR Ø 22.8
7x2.80 Steel
26x3.60 AL1



DROPPER WIRE

The **dropper wire** is used to connect overhead railway lines to support structures, ensuring proper tension and alignment of the catenary system. It is a flexible conductor that we can manufacture according to the relevant standards and specific customer requirements.

Reference standards **DIN 43138**



Example:
Dropper wire
84 x 0.50 mm² Cu Mg



FLEXIBLE IN PACKAGING SOLUTIONS

We offer **three standard packaging solutions** for contact wire and stranded conductors, depending on weight and size of the conductor. Our standard packaging includes **wooden reels** with diameters of 1300 mm, 1500 mm, and 1900 mm. Depending on the type and weight of the conductor, **steel drums** may also be used. We remain fully flexible in meeting customer-specific needs, including the use of customer-provided packaging or accommodating particular requirements related to dimensions, materials, or logistics.

