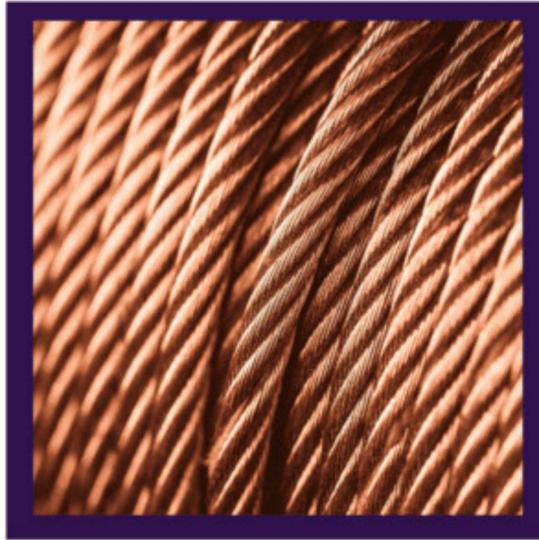
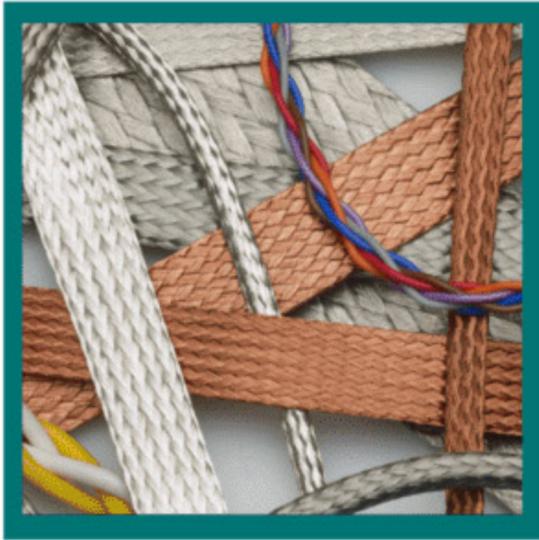




Q1 2023 MARKETING NEWSLETTER



Contents

02.

Success story of our employee

03.

Learn pigtail manufacturing process with our eBook

04.

IW Product Spotlights

07.

Industry events. Save the date!

08.

Market News



International Wire

A PANTHEON ELECTRIC COMPANY



315-245-3800



sales@internationalwire.com

Inspiring stories of IWG employees

“Let me introduce myself: my name is Isabelle Palermo, I joined the company Tresse Metallique J. Forissier at the age of 19 as a production worker. I have been with the company for 34 years now. I am proud of my career path because I have been adaptable and multi-skilled.

I worked my first 15 years in the Connections workshop on mechanical, hydraulic, and pneumatic presses. I also learned to work on machine tools such as drills and sanders. I was trained in tin soldering as well as braid and strip cutting. In this workshop, the Connections were mainly manufactured for electrical appliance customers. Then I switched to the aeronautics sector where I could learn crimping. In this workshop, I learned to make connections that were intended for airplanes.

My team leader asked me to work in the Flexbars Connections workshop, where I could discover the design of new connections for power and distribution customers. I had to adapt to a new team with new tasks, such as using crosscut saws, pneumatic and manual strippers, and planetary presses.

Finally, on March 1, 2023, the Production Manager offered me a promotion to the position of production controller, which I obviously accepted. For me, this proposal is really a recognition of my investment over all these years in the workshops. It is also a comfort in life since I work during the day instead of doing the morning and evening shifts.

I can only thank the company Tresse Métallique J. Forissier for having trusted me. The company was able to show flexibility since I was lucky enough to be the mother of two daughters during my career. The management had granted me a part-time position, initially at 50% and then at 80% as part of my parental leave.

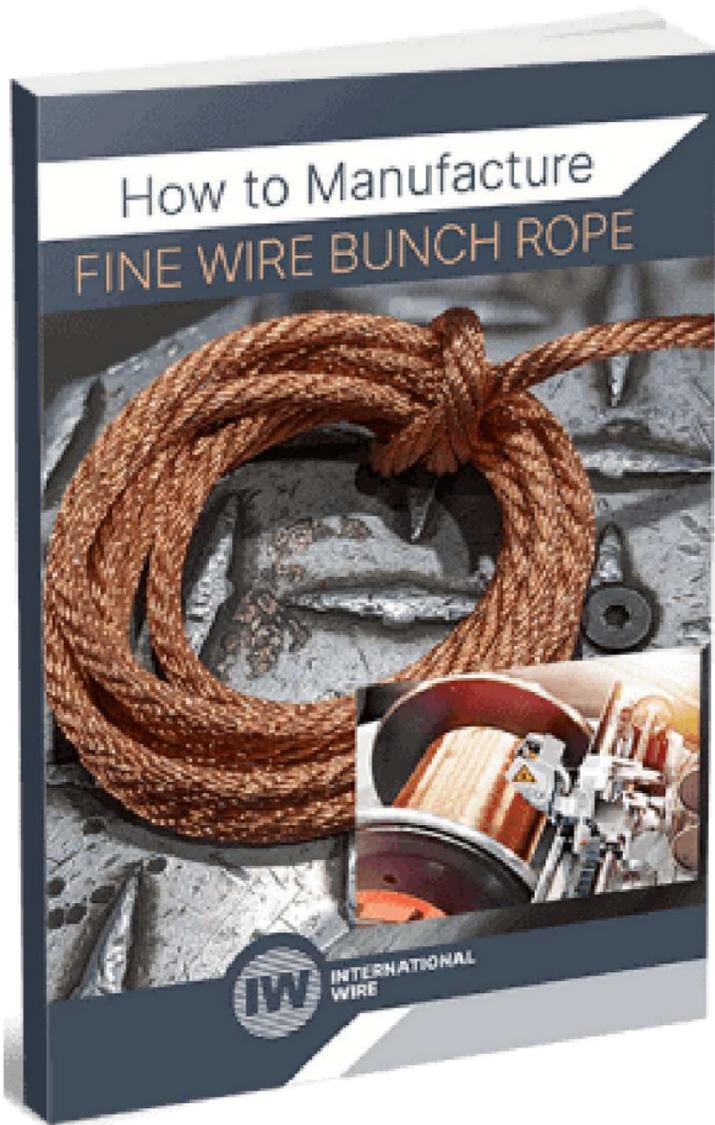
Tresse Métallique J. Forissier is a caring, supportive, training, safety, and environment-oriented company with great colleagues. After 34 years of service, I am still learning and as motivated as ever!

Thank you!”

Isabelle Palermo, Production Controller at IWG Tresse Metallique J. Forissier



Flexible and reliable pigtails from IW



Everything You Need to Know About Manufacturing Fine Bunch Wire Rope

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Product Spotlight

High-performance PTFE insulated cable

High-Performance Conductors Business Unit

supplies soft silver-plated conductors 19/30 ETP SP2%.

Application:

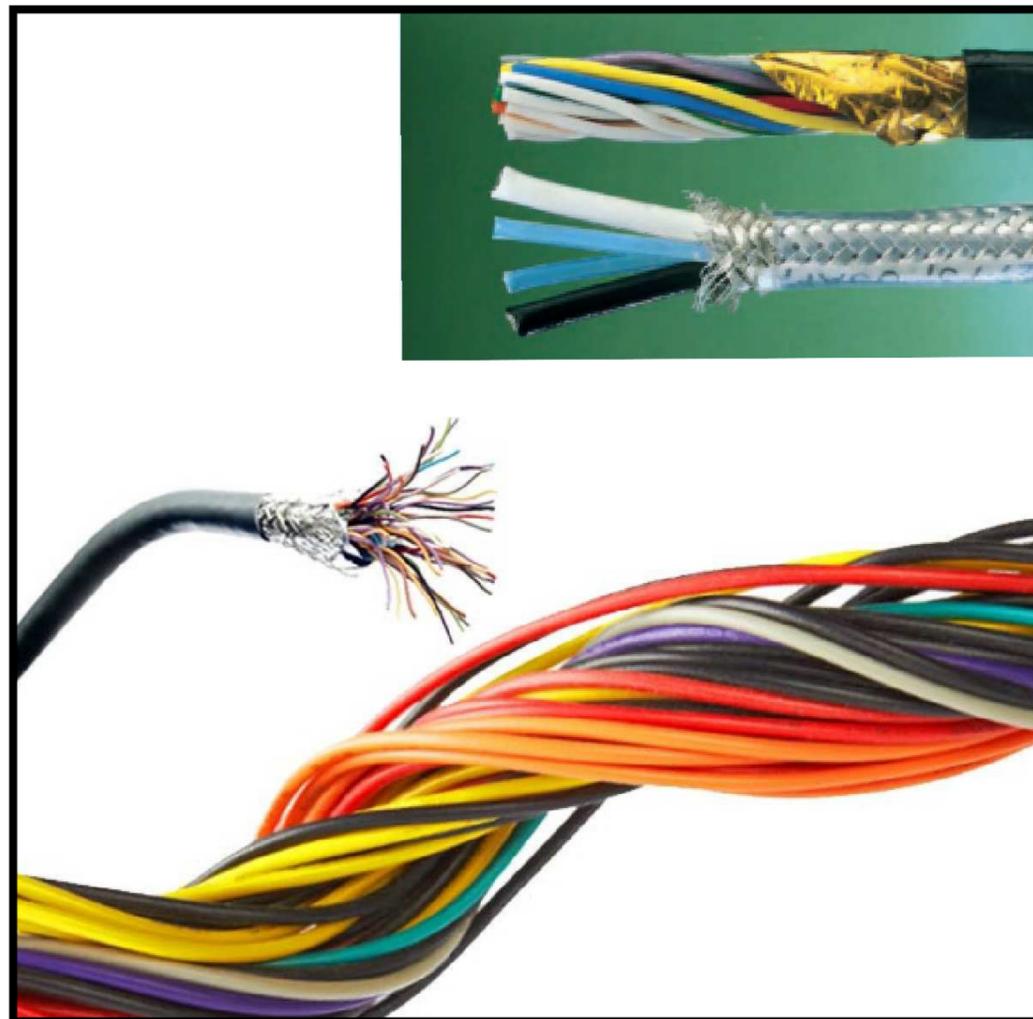
Polytetrafluoroethylene (PTFE) is a fluorocarbon polymer insulation material that allows wiring systems to be used and operated in the most demanding environments. PTFE is resistant to lubricants and fuels, very flexible, plus it has excellent thermal and electrical properties. Particularly suitable for applications requiring high levels of thermal and chemical resistance.

Specification:

Gram Weight, Outside Diameter, DC Resistance

End-User/Market:

Aerospace/Military



Rail Bond

Bare Wire Division provides 2/0-19/.0837 BARE CONC 5.41" and 4/0-19/.1055 BARE CONC 6.23" conductors for rail bonds.

Application:

Rail bonds are the industry standard for rail joint bonding. They provide the necessary current carrying capacity, unchanging electrical resistance, superior corrosion resistance, contributing to a safe and reliable system.

Specification:

Conductor strength, flexibility and durability

End-User/Market:

Transportation Industry (Railways, Subways)



Product Spotlight

Power cable

Owl Wire and Cable manufactures 61/.1109 Bare Copper Compact Concentric conductors for power cables.

Application:

For exposed wiring and raceways in wet and dry locations. Use in ventilated and non-ventilated cable trays in vaults and switch rooms. For direct earth burial (with protection as required by inspection).

Specification:

Conductor diameter, gram weight, length of lay.

End-User/Market:

Industrial/Utility, Civil and Commercial Construction Projects



Micro shunts

Engineered Products Division provides a range of micro shunts specially designed and produced for a customer's application.

Application:

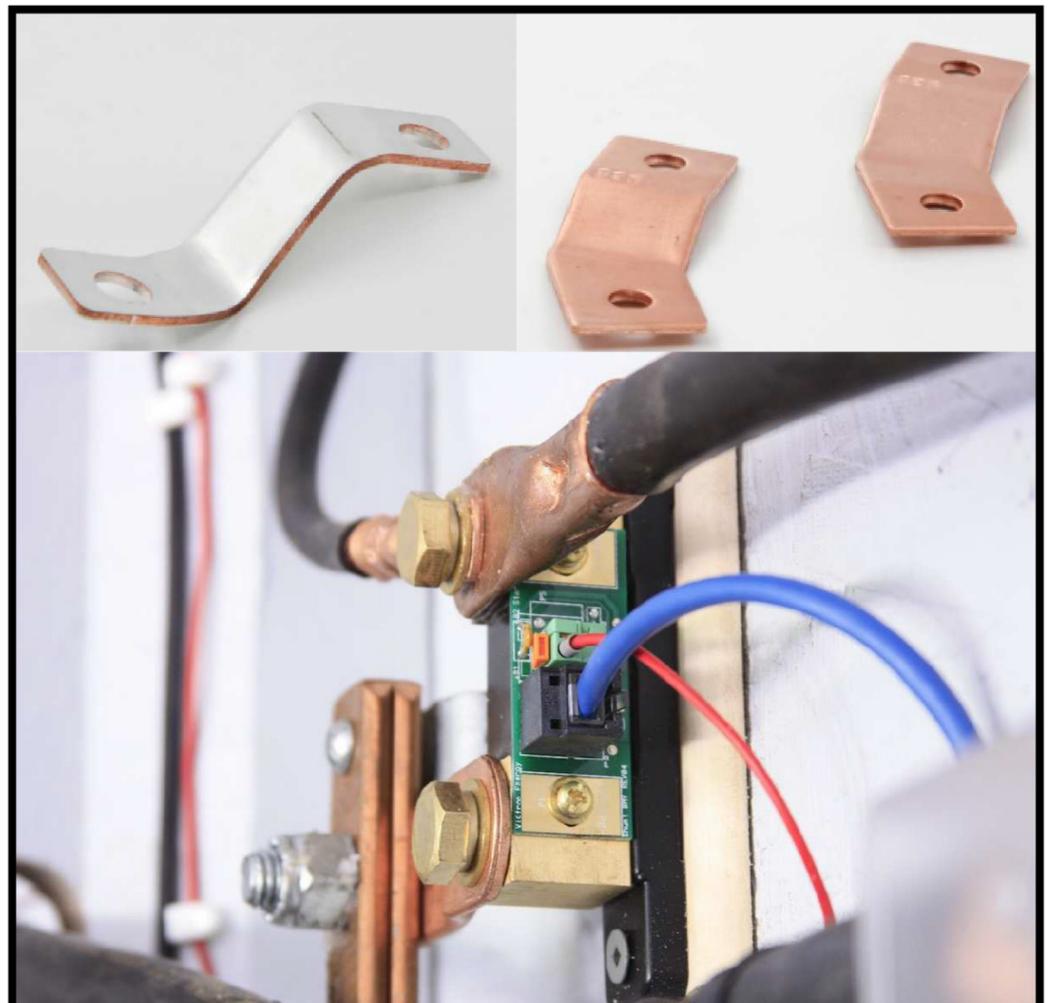
Shunts provide electrical connections in battery packs, inverters and electric motors. They are manufactured from bare or tinned copper.

Specification:

Shunt shape and size.

End-User/Market:

Automotive/Industrial



Product Spotlight

Bobbins for RFI/EMI/EMC shielding

Continental Cordage provides various constructions of tinned bobbins like 10/34 TC, 6/34 TC, 8/36 TC for customers' braiders for cable assembly RFI/EMI/EMC shielding.

Application:

Electronics, for industrial or military applications, must meet stringent electromagnetic interference (EMI) requirements. A customer uses patented process, which provides a metal-to-metal contact with the connector and copper braided shield. This construction allows cable assembly to have a low-conductive path as well as a low-RF impedance from connector-to-connector with the resulting high shielding effectiveness.

Specification:

End count, individual wire AWG.

End-User/Market:

Industrial/Military



Flight control harness

Hamilton Products applies yellow PEEK braiding over the flight control harness/jumper cables.

Application:

Flight control harnesses are designed to the specific aircraft model and include both static and dynamic configurations. Flight control jumper cables are designed for flexure, resistance to SWAMP environments and temperature extremes to -75°C.

Specification:

Inner conduit, outer braids

End-User/Market:

Aerospace



Save the date! Must visit industry events 2023



VARIOUS WIRE BRAIDS



ROPE-LAY BUNCHED CABLE



TINNED FINE CONCENTRIC WIRE



BARE ROPE-LAY CONCENTRIC CABLE



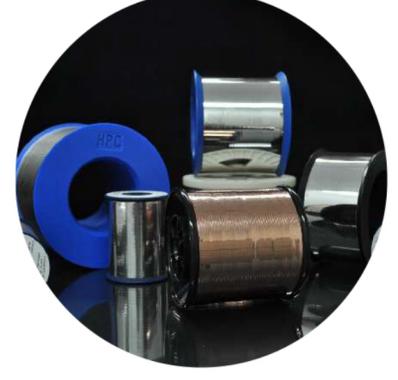
BOBBIN WIRE FOR SHIELDING



FINE WIRE BUNCHED ROPE



SPECIALTY TEXTILE WIRE



COPPER ALLOYS WIRE

**May 9-11, 2023
Atlanta, GA**



Booth 1514

SEE YOU AT OUR BOOTH!

**May 16-18, 2023
Milwaukee, WI**



Booth 1516



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Opportunities for copper recycling

The growing demand for copper will require a combination of raw materials coming from mines (primary copper), as well as from **recycled materials** (secondary copper).

S&P Global estimates show that recycled copper will account for 22% of all refined copper in the market by 2035, up from 17% currently.



Unlike most other materials, copper can be perpetually recycled without loss of performance or qualities. Recycled copper is identical to mined copper and will be critical to reduce supply deficit.

Global Copper Use, Mt

	2022	2035	Demand growth	CAGR 2021-35
Renewables	1.1	1.6	0.6	3.4%
Electric vehicles	0.9	3.7	2.8	11.3%
Civil & building construction	8.8	9.9	1.1	0.9%
Grid (incremental)	0.1	1.8	1.7	26.3%
Other	19.7	21.5	1.7	0.7%
Total	30.6	38.5	7.9	1.8%

Metal markets seem to think copper is the new lithium. A lack of recent mining activity has added to worries that there won't be enough of the red metal for the energy transition, a popular topic at the 2023 World Copper Conference in Santiago, Chile which took place April 17-19.

South America currently dominates copper production, and Chile is the largest mined producer. Increasing mine output has proved challenging, prompting a wave of deal-making in the industry and **warnings of a severe supply shortfall** over the next decade.

Copper demand is projected to double by 2035 and reach more than 53 million metric tons by 2050, driven by electrification and the energy transition. Copper supply, however, will only meet 80% of the demand by 2030 unless significant new copper mining activities come online. Copper demand forecasts are based on factors such as price, industrial production, and global economic scenarios. Secondary copper supply is estimated to be 17.5% of the demand.

"The market overall is pretty tight," said Robert Edwards, a copper analyst at CRU. "Longer term, there's a narrative around resource scarcity, the green transition with EVs and renewables, and the build-out of electricity grids. **On paper, it's quite a substantial supply gap opening up over the next ten years,**" he added.

Copper miners have been at the center of a recent spurt of deal-making. Glencore PLC recently offered \$23 billion for Canadian miner Teck Resources Ltd., potentially creating the third-largest copper producer in the world, and Teck rejected the offer. On April 17th, BHP Group Ltd. also gained court approval for the takeover of OZ Minerals Ltd., a deal valued at \$6.34 billion.

However, analysts say the main hurdle is a **lack of newly mined resources.** According to the International Copper Study Group, the mined output globally in 2022 was 21.8 million tons, rising only 1 million tons over the previous three years. For reference, in 2021, copper demand was 25 million tons.