



**International
Wire**

A PANTHEON ELECTRIC COMPANY

Q4 2022 MARKETING NEWSLETTER



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Highlights of the year and 2023 outlook

As I reflect on our many successes of 2022, I would be remiss without expressing my gratitude and first acknowledging the tremendous contributions of our dedicated team. As I look back, I recognize that together, we have faced many obstacles. A year that was marked with tumultuous circumstances, not the least of which began with the most rapid rise in Covid19 cases that we had thus far seen, followed by a return to 'normalcy', historically high backlogs, supply chain shortages, and significant macroeconomic events leading to generationally high levels of inflation. Still, as a team, we faced every obstacle with tenacity and conviction, a hallmark of the men and women that make IWG the best wire fabricator in the industry. As we know, all businesses face obstacles, it is how resolute and resilient IWG is that distinguishes us from all the rest.

What else distinguishes IWG is our collective capability to provide the most diverse portfolio of products in the industry. From our massive installed capital base and our formidable capacity to our engineering and process capability, we are unmatched in our industry. In addition, our ongoing investment approach to process capability, capacity, throughput, and technology will solidify our place in the future. Continual change in our industry is certain. In a world where copper has enabled evolution for the past 125 years, the companies that have formed IWG have been there... As we look to the future, green electrification, decarbonization, onshoring and technology will drive the demand for copper for generations to come. As in generations past, IWG will be there.

For 2023, I am excited to begin our year with a new focus on serving our valuable customers. We have steadfast objectives, goals, and a renewed spirit toward serving the needs of a rapidly changing industry. This year, we will begin to see the initial benefits of a 5-year unprecedented level of investment in capacity, throughput, and technology. In addition, our continued quest to become an employer of choice will help shape the future of IWG for a whole new generation of team members. Like every year, I am certain that 2023 will produce its unique set of obstacles for our business. But I am also certain that it is this team, who will prevail.



Greg Smith,
IWG CEO and President



Employee Success Story

“I was a young high school graduate, and after my military service, I was called to Italtrecce in 1988 for a job interview. They were looking for general workers to join the workforce. After a few days, they confirmed my application and hired me on 22/11/1988 as a warehouse operator.

I started from the bottom, having a very uncompromising but certainly knowledgeable mentor next to me. It was hard to follow the guidance at first, but I had time to learn. In 1992 after the classic apprenticeship, I switched to the role of press operator with tooling duties. Again, learning here has been very important for my professional future.

In 1998 the Company moved to a new plant, and at the same time, a department head was retiring. At Italtrecce they decided to give me that role with the supervision of five people. In the following years, the department continued to expand. Now the department has 15 people and 10 presses, with an output of about 300,000 braided connections per month. With the experience I have gained to date, in addition to managing the molds, I am able to perform maintenance on them, including the presses and other tools in the Company.

I am 55 years old, and when I look at my 35 years with the Company, I am extremely satisfied with my professional career. I'm proud of all the things I have learned and developed in the Company, which I now pass on to younger employees.

Even now I continue to learn, certainly, the speed at which the world is changing the world of work is amazing. New technologies are simplifying operations, and surely without passion and expertise, you cannot have excellent results. This is what I try to convey to all the people who join the Italtrecce Team.

I am grateful to the Italtrecce for the opportunity to grow and continued trust in me and my expertise.”

Francesco D'Angelo, Production Manager at IWG Italtrecce.



Product Spotlight

Power Liftgate System Wiring

High-Performance Conductors Business Unit supplies soft bunched silver-plated wire 19/36 ETP SP4%.

Application:

IWG conductor is run inside of a conductive rubber seal to provide safety for motorized hatches in Honda CRV. Honda CRV is equipped with Intelligent Anti-Pinch system: if an object blocks the Power Liftgate System during operation, the liftgate will stop and automatically move in the opposite direction to avoid damage or injury.

Specification:

Gram Weight, Outside Diameter, DC Resistance

End-User/Market:

Automotive



Audio Cable

Bare Wire Division provides 12-105/32 BC 1.50" bunched bare conductors for audio cables.

Application:

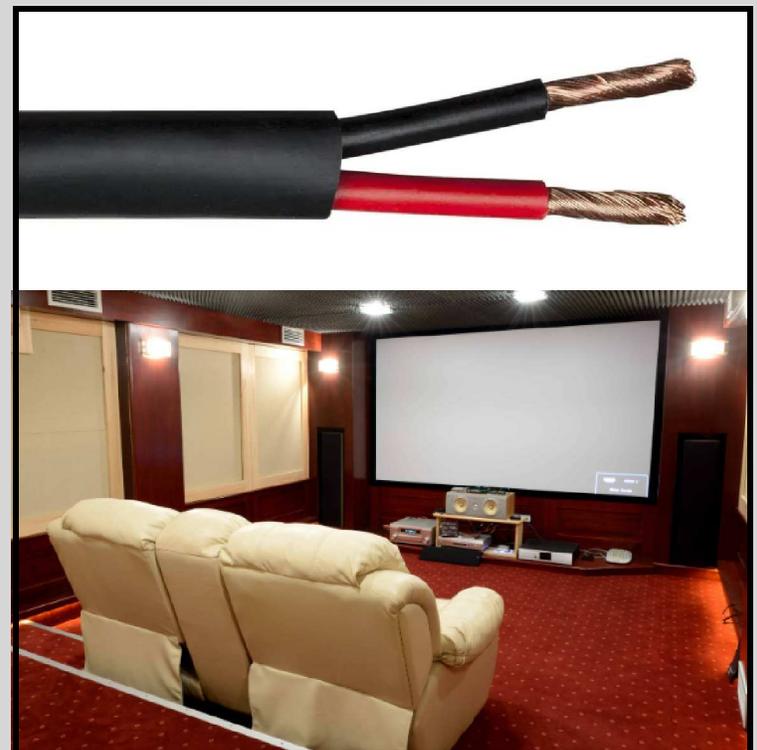
Speaker wire is used to make the electrical connection between loudspeakers and audio amplifiers. Modern speaker wire consists of two or more electrical conductors individually insulated by plastic (such as PVC, PE or Teflon) or, less commonly, rubber. The two wires are electrically identical, but are marked to identify the correct audio signal polarity.

Specification:

End Count, Conductor Diameter

End-User/Market:

Consumer/Lifestyle



Product Spotlight

Feeder Cable

Owl Wire & Cable supplies rope-bunched high-strand count bare copper conductors of different constructions for feeder cables.

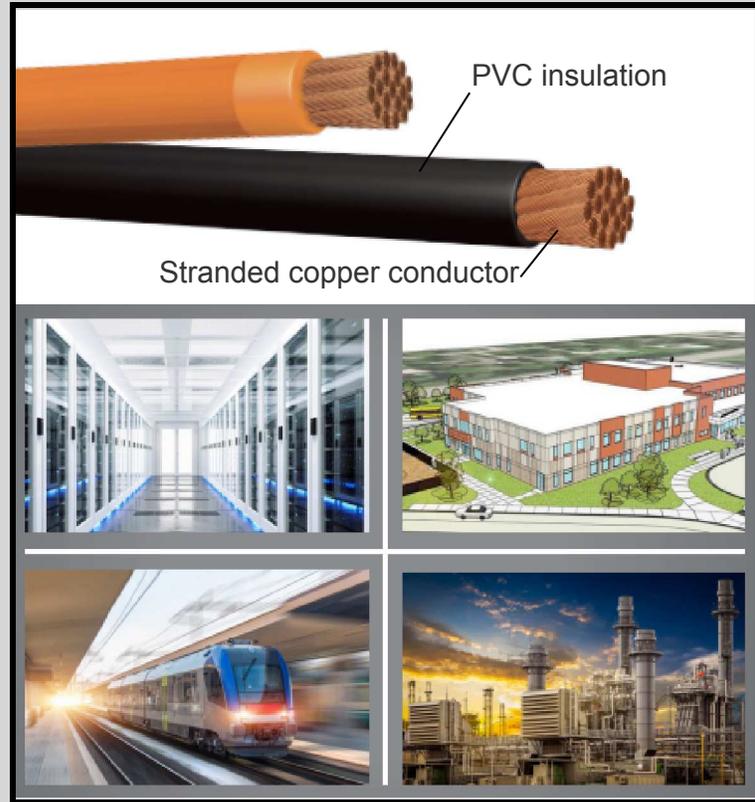
Application:

Feeder cables are used to supply power from one part of a facility to another, from point A to point B. Perfect for providing temporary power service during construction or to supply power to specialized equipment. Primary feeder cables typically run between main switchboards and power distribution transformers. It is optimal for applications in control cabinets, in machine tool, data centers, and as AWM in appliance wiring applications.

Specification:

Conductor Diameter, Gram Weight, Lay Length

End-User/Market: Industrial,



Press welded shunts

Engineered Products Division manufactures press-welded shunts of various constructions.

Application:

The laminated copper shunt is a flexible copper connector, and it is made of many thin layers of laminated copper press-welded at both ends. Copper Shunts are produced from high-conductivity, flexible electrolytic copper foils/sheets. Applications include power plants, resistance welding, transformers, generators, switchgear.

Specification:

Shunt shape and size, strip thickness, number of strips.

End-User/Market:

Industrial



Product Spotlight

Desoldering braid

Continental Cordage provides various constructions of oxygen-free flat braids.

Application:

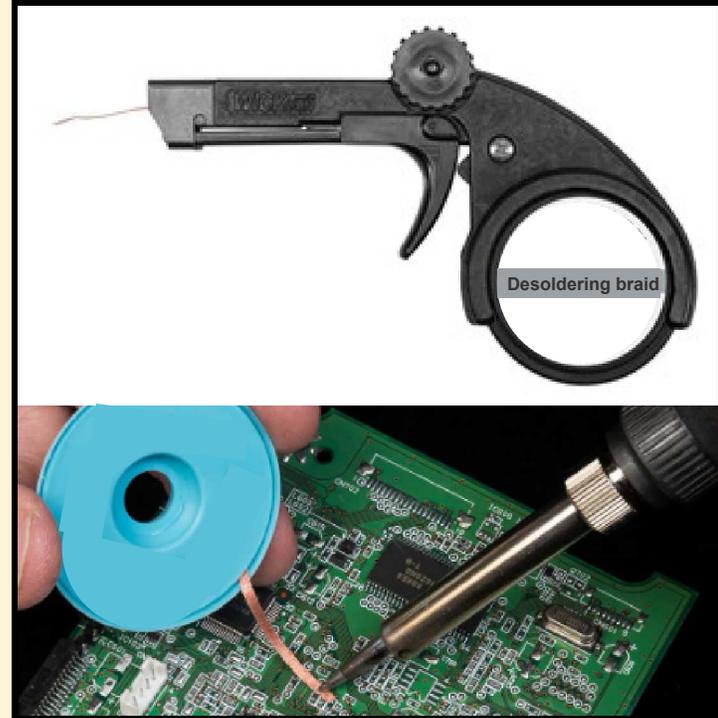
Desoldering braid consists of copper wire that has been braided and coated with flux. The desoldering braid gets used in conjunction with a soldering iron to remove solder from solder joints and components. Desoldering braid can also be known as wick, solder wick, desoldering wick, or solder braid. Braid can be dispensed with gun dispenser.

Specification:

Width, thickness, end count, picks per inch.

End-User/Market:

Security/Data Transformation



Ignition Cable/Lead

Hamilton Products applies PEEK braiding over ignition cables (ignition leads).

Application:

Ignition leads are used to distribute the high voltage from the ignition coils to the spark plugs in ignition process. Ignition leads are designed and constructed to offer the most effective and efficient conduit between the engine exciter and igniter.

Specification:

Inner conduit, outer braids

End-User/Market:

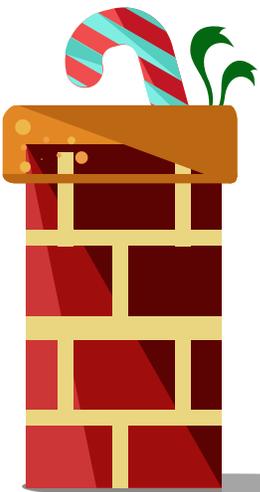
Aerospace



IWG Toys for Tots - delivering gifts to less fortunate

12 Central NY plants from our Bare Wire Division and Owl Wire Division participated in a companywide toys drive to support the local Toys For Tots program.

A total of **530** toys were collected.





Camden Holiday Stroll



The IWG Sales Department and family members volunteered their time at the Camden Holiday Stroll to cook and serve hot dogs to the community.



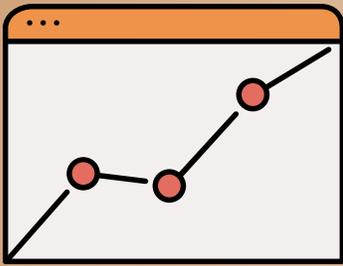


**International Wire
donated**

700

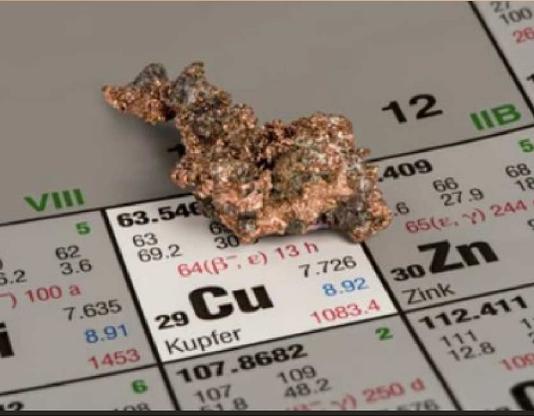
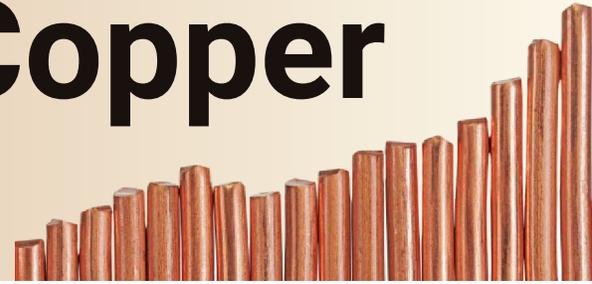
**smoke detectors
to local fire departments.**





Market Watch

Copper



Dr. Copper, Ph. D. in Economics



"Doctor Copper" is often cited by market and commodity analysts as having a strong ability to assess overall economic well-being through the price of copper because of the metal's wide-ranging application in construction, electrical equipment, and transportation.

The percentage of global copper production consumed by each sector is estimated by the Copper Development Association (CDA) to be around:

- 46% building construction
- 21% electrical
- 16% for transportation
- 17% used in consumer products and industrial machinery/equipment.

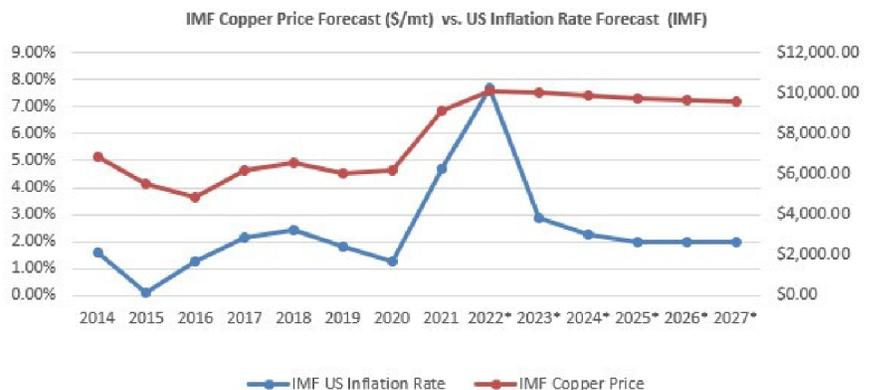
This makes copper prices a good leading indicator of the economic cycle. For example, if orders for copper are canceled or delayed, the price will drop. This can be a leading indicator that an economic recession is at hand. Conversely, if orders for copper are rising, the price will go up. This can be a leading indicator that industrial jobs are increasing and the economy remains healthy.

Copper Outlook



The short-term outlook for copper is clouded by recessionary fears, monetary tightening and uncertain Chinese demand. However, the long-term fundamentals remain intact.

Assuming that the world does not plunge into the dark ages, copper is setting up for an explosive supply-demand imbalance over the next decade. World demand is expected to double by 2035 at an unprecedented rate, driven by the electrification trend in developing countries and the energy transition in developed countries.



"Doctor Copper" is not infallible and should not be relied upon as the only indicator of economic health. For example, a temporary shortage of copper may lead to rising prices even as the global economy is slowing down; conversely, a copper glut may cause lower prices despite robust economic growth.

[1] <https://seekingalpha.com/article/4567054-copper-invest-in-physical-metal>, [2] <https://www.investopedia.com/terms/d/doctor-copper.asp>



By the end of 2022, the only sure thing is that we live in times of great uncertainty and that our volatile, complex, and ambiguous world will not get any more predictable in 2023.

The economy has remained unpredictable, with emergent events and continuations of what has led up to our current point providing a focus on what trends we should keep an eye on in the upcoming year that could affect us all.



1. Geopolitics will continue to threaten the global economy.



Shifts in geopolitical tensions impact the economy by disrupting supply chains and causing increased government spending on the military.

2. Increased severe weather events will impede economic activity.



More violent hurricanes, destructive floods, extreme heat, and cold events impact the global economy as the high costs of recovery from catastrophic weather burdens businesses and governments.

3. Higher interest rates will peak and should fall by end of 2023



As inflation levels start to fall, central banks should be able to let off the gas on higher interest rates. Recession may be inevitable; however, the depth is uncertain.

4. Labor shortages will ease up.



The job market was tight for the better part of 2022, but if the economy slides into a recession, workers will be less choosy, and employers will not need to fill as many positions, bringing some balance.

5. Employee relationships with their jobs will continue to evolve



Workers are rethinking their careers. While a good paycheck may have been sufficient in the 20th century, today's workers also want engagement, involvement, and even fulfillment in their jobs.