



**Wired for
success**

International Wire Q1 2022 Marketing Newsletter



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International Wire Cable Services

We opened our **ONLINE STORE!**

Shop for manufacturer direct solid and braided wire in a variety of packages and cut to lengths at internationalwire.com



Easy Online Ordering and payment with credit card



Exceptional Service



Engineering Support



Fast Delivery



Guaranteed Quality

Key executive personnel changes took place at International Wire Group in the beginning of 2022



Stacey Ingraham to Vice President of Human Resources.

Stacey Ingraham joined International Wire in 2014, during her tenure with the company, she spent 3 years in a manufacturing management role which provided her with a unique perspective into understanding the needs of all employees. Stacey will lead and direct HR activities across IWG internationally, positioning the company for success in becoming an employer of choice. She will promote initiatives that support cultural development, succession planning and career development opportunities.

Vince Donaldson to General Manager of Owl Wire & Cable.

Vince Donaldson began his career in the Wire & Cable Industry when he joined Camden Wire Co. in 1985. He has spent the last 36 years building a strong commercial team focused on providing the highest levels of customer satisfaction. Vince will lead OWL Wire & cable into the next chapter with focus on operational excellence and customer service.



Lenny Argentine to Vice President of Sales and Marketing.

Lenny Argentine joined International Wire in 1994 and has held various Commercial roles across multiple International Wire divisions. In his new role, he will align resources across the worldwide enterprise to improve customer experience and build upon market data to position the company for growth. Lenny earned his Bachelor of Arts in Philosophy from LeMoyne College and his MBA from State University of New York at Oswego.



Yulia Leskovets to Director of Sales and Marketing.

Yulia Leskovets joined International Wire in 2020. She will lead initiatives focused on increasing International Wire's brand awareness and developing marketing and business growth strategies. Yulia brings international sales and marketing experience with a proven track record from Freeport-McMoRan and 3M. She holds Master's degree in Engineering and Master's degree in Economics and Management from Bauman Moscow State Technical University.



Jennifer Fox to Director of Marketing Analytics.

Jennifer Fox began her career at International Wire in 1994, holding multiple positions including Manufacturing, Production Control, Plant Operations Management and Quality Assurance. As a Six Sigma Black Belt, Jennifer has a strong background in statistical methods and experience in executing data-driven solutions with a strong cross-functional understanding of the organization. As Director of Marketing Analytics, Jennifer will support growth through market intelligence and data analytics.



Kerri Grant to Director of Customer Service.

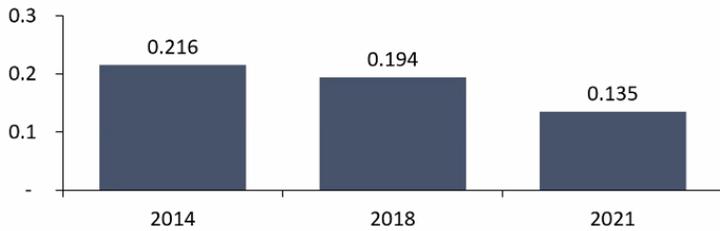
Kerri Grant joined International Wire in 1998 and brings unique experience to the company. Throughout her career, she held various positions in Finance, Operations, Quality, Continuous Improvement, and Manufacturing Management. Kerri will direct and oversee all aspects of customer service policies, objectives, and initiatives for all International Wire North American Business Units. She will focus on building standards across organization to provide industry-leading customer service.



ESG at International Wire

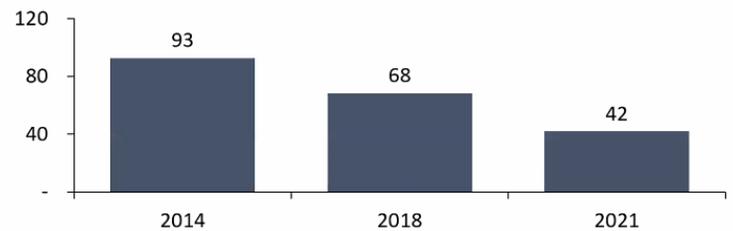
International Wire is committed to continuous improvement, environmental responsibility, and a positive impact on all our stakeholders. Through multiple initiatives, the company made great progress in the reduction of environmental impact. We are proud to share our achievements.

Domestic Lbs CO₂E / lbs. Copper Processed



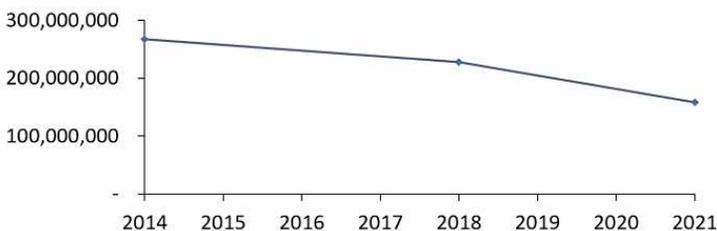
Volume Adjusted – 38% Reduction

Total IWG CO₂E (Lbs. in millions)



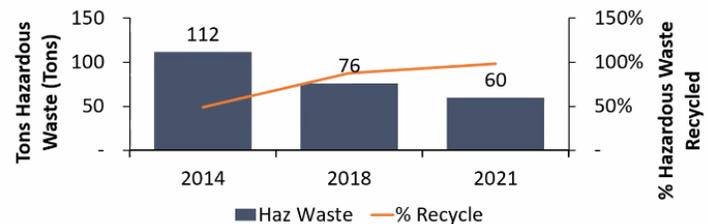
50% reduction in scope 1 and 2 emissions since 2014

Electricity Use 2014 – 2021 (KW-H)



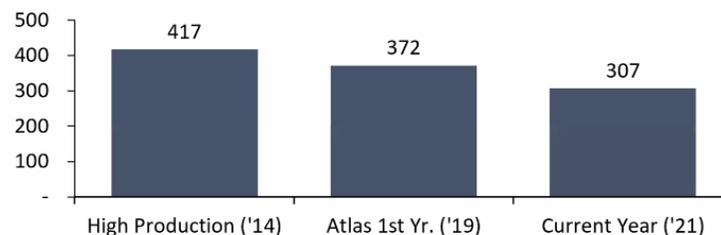
Electricity consumption Kw-H 2014 to 2021 reduced by 41%

Domestic IWG Hazardous Waste Reductions



Since 2014, Hazardous Waste produced is reduced by 46%, while recycling of hazardous wastes has increased by 49%

Domestic IWG Total Water Use (Gal. in mms)



Since 2014, water use declined by 26%



Product Spotlight

Ribbon Cable

High-Performance Conductors supplies .003"x.062" flat bare wire made of alloy 35EF for ribbon cable.

Application:

The rear window defroster system operates by supplying electrical current to a grid mounted in the rear glass. The current flowing through the grid will heat the surrounding glass, allowing the window to be cleared of moisture. The ribbon cable is used on the sliding glass window for all Dodge Ram pickups that have rear window defrost. The flat conductor is laminated in parallel to create a thin, light, and flexible connector. The high-strength copper alloy is required for the higher flex life.

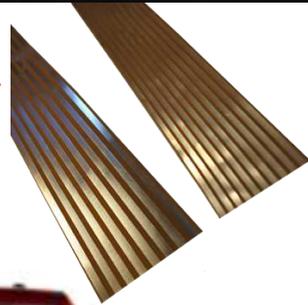
Specification:

Flat wire width and thickness

End-User/Market:

Dodge, a division of Stellantis/Automotive market

Ribbon Cable



Cathodic Protection Cable

Bare Wire Division provides stranded bare copper concentric conductor 7/.0672" for cathodic protection cable.

Application:

Pipelines and storage tanks can be exposed to water, oxygen, soil, and to sunlight throughout their lifecycle. This environment induces corrosion to occur. Gas transportation pipelines are usually protected from corrosion by a special coating, applied on the outer surface of the pipeline. Cathodic protection is used in conjunction with coating, its goal is to enhance corrosion protection. A piece of 'sacrificial' metal that easily corrodes is installed near the pipeline. When corrosion occurs, it is drawn towards the sacrificial metal using a rectifier and cables, leaving the pipeline protected and the sacrificial metal to corrode instead.

Specification:

Conductor Diameter, Gram Weight, Length of Lay

End-User/Market:

Industrial/Oil & Gas



Product Spotlight

Soaking Pit Cable

Owl Wire & Cable supplies tin-plated annealed copper conductor 65/.0100" per ASTM B33.

Specification:

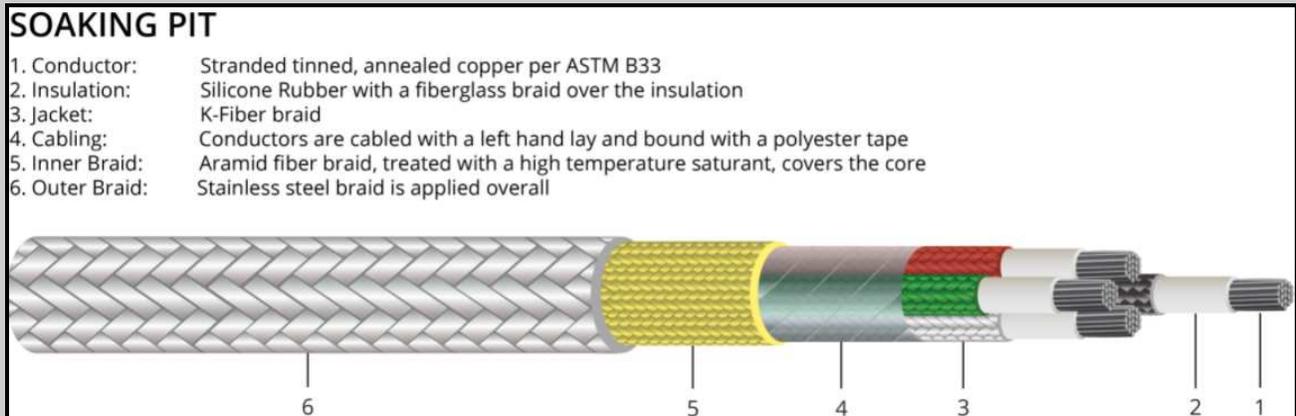
Conductor Diameter, Gram Weight, Length of Lay

End-User/Market:

Industrial

Application:

Soaking Pit Cable is constructed for use in high-temperature applications as a multi-conductor power cable. Especially suited to environments with hot material contact, molten splash, and mechanical abuse. Widely used in steel plants for slag and teeming ladle car cables and overhead crane cable. Engineered to provide long service life under extreme heat and flexing applications in harsh, abrasive environments.



Knitted Wire Mesh Tape

Engineered Products Division manufactures knitted wire mesh tape made with round wires from 44 AWG up to 30 AWG.

Application:

Knitted Wire Mesh Tape is mainly used to wrap a cable in order to provide an Electro-Magnetic Compatibility shielding, main purpose of which is to prevent electromagnetic interference (EMI) or radio frequency interference (RFI) from impacting sensitive electronics. It is also widely used in the following applications:

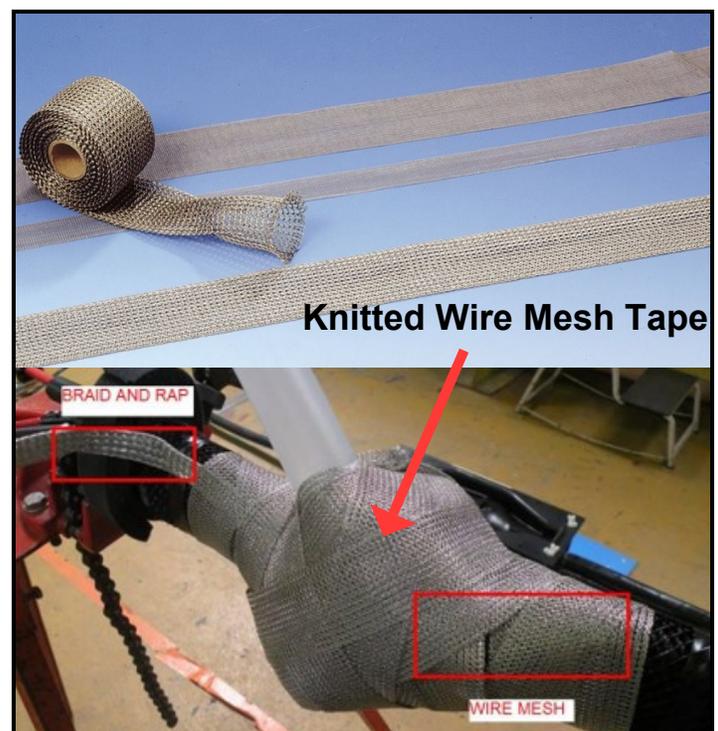
- Screening of electrical power, control, communication and data cable;
- Earth continuity in cable joints;
- Mechanical protection;
- Joining kit.

Specification:

Tape width, thickness, wire diameter, end count

End-User/Market:

Industrial



Product Spotlight

Offshore oil rig cable

Continental Cordage provides 48x5/28 Bronze Overbraid, various core sizes, various picks per core size, coverage to be at least 85%.

Application:

The offshore cable requires low smoke, zero halogens, flame retardant and fire resistance, mud resistant for special application. 48x5/28 Bronze Overbraid is used in offshore oil rig cable to provide protection and withstand high temperatures. The cable is used in a drill hole to power drilling equipment.

Specification:

Coverage, Picks Per Inch, Braid Angle, Good Splices.

End-User/Market:

Oil&Gas market



Fiber-optic cable

Hamilton Products applies a Bronze Overbraid to several different fiber-optic cable diameters that range from 0.193" OD up to 0.77" OD. The braided armor offers excellent resistance to chemicals, fluids, fungus and abrasion.

Application:

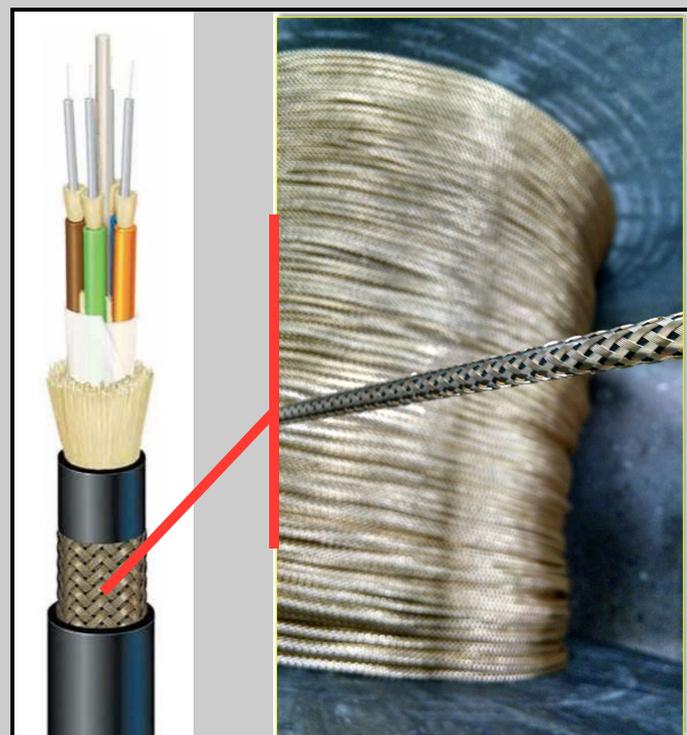
A fiber-optic cable, also known as an optical-fiber cable, is an assembly similar to an electrical cable, but containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated and contained in a protective tube suitable for the environment where the cable is used. Different types of cables are used for different applications, for example, long distance telecommunication, and land tactical fiber optic cable for the U.S. military.

Specification:

Coverage, Picks Per Inch, Braid Angle, Good Splices.

End-User/Market:

Data transformation



International Wire awarded for Continuous Improvement by Carlisle Interconnect



**Wired for
success**



International Wire Group is pleased to have recently received Carlisle Interconnect Technologies' prestigious "Continuous Improvement" Supplier Award.

High Performance Conductors, a division of IWG, supplies CIT with high-performance conductors for commercial aerospace, military and defense electronics, test & measurement, medical technology, and industrial markets.

HPC has been chosen among many other suppliers. Continuous Improvement Award was conferred to HPC for an outstanding reduction in defects per million units and for outstanding improvement in on-time delivery.

We are honored to receive the recognition and grateful to CIT for this prestigious award and for our valued partnership.

Active Shooter Training at International Wire



Our employees at High Performance Conductors business unit completed three full days of Active Shooter Response classes with the instructors from ProActive Response Group.

Even with armed security on the premises, there's no way to know how long it will take that armed guard or first responder to arrive. In those critical moments between when workplace violence begins and when law enforcement gains control it's important for employees to feel prepared and to know how to respond.

HPC employees learned how to recognize a potential threat, what actions to take to increase the likelihood of survival in the event of an active shooter, and how to act as their own first responders until law enforcement and EMTs arrive.

The course included hands-on training on disarming a subject, applying tourniquets, packing wounds and utilizing other major bleeding control techniques to be prepared to potentially save lives.



International Wire strives to give back to the community by participating in several programs aimed to improve lives

ADOPT -A-ROAD



High Performance Conductors, a division of IWG, helps to keep roadways litter-free

HPC partnered with the South Carolina Department of Transportation (SCDOT) and adopted a stretch of Campton Road in Spartanburg County. International Wire's volunteers are committed for a minimum of two years to pick up litter along a two-mile section of the adopted roadway. There are four set dates each year. Spartanburg County Environmental Enforcement Department provides safety vests and bags as needed.

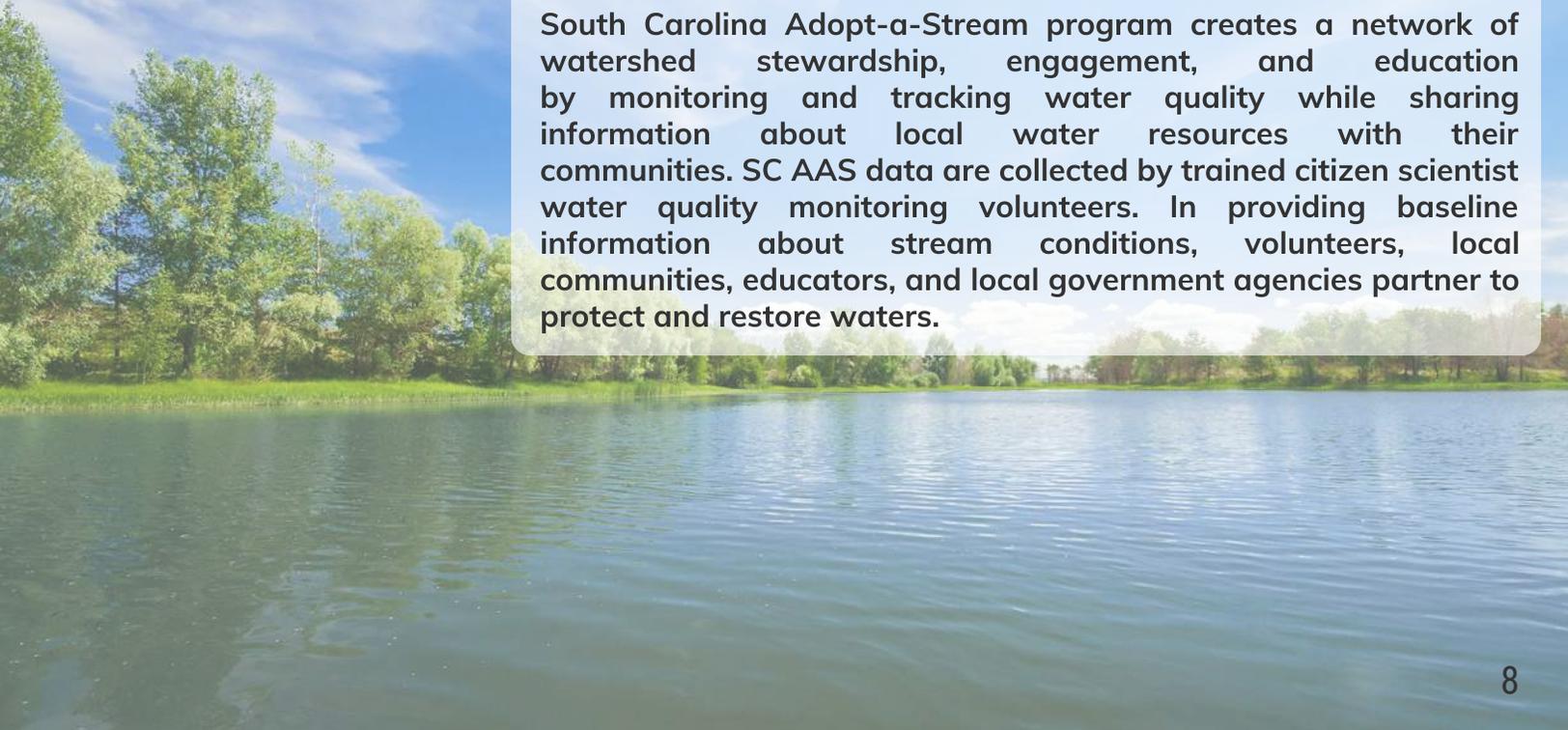
47 HPC employees and friends collected 589 pounds of trash and recycling materials from the roadside during the first cleanup.



ADOPT-A-STREAM

High Performance Conductors makes a donation of \$15,000 to support the health of local water resources

South Carolina Adopt-a-Stream program creates a network of watershed stewardship, engagement, and education by monitoring and tracking water quality while sharing information about local water resources with their communities. SC AAS data are collected by trained citizen scientist water quality monitoring volunteers. In providing baseline information about stream conditions, volunteers, local communities, educators, and local government agencies partner to protect and restore waters.



International Wire Group makes donations to Crime Stoppers and to K-9 Unit at the Spartanburg County Sheriff's Office



At International Wire Group, we believe in growing stronger communities in the areas we operate and recognizing the contribution of those who have dedicated their lives to support us. As a token of our appreciation for the continued sacrifices of both our 2 and 4-legged service members, we made a donation to the Crime Stoppers of Spartanburg and Chaplains Benevolence Fund (which helps support the Spartanburg County Sheriff's Office K9 Unit). With these donations, our local law enforcement will be better equipped to manage the demands of a growing community.



SUCCESS STORIES FROM OUR EMPLOYEES



"I was in-between my 1st and 2nd year of college and needed a summer job to earn some spending money. A friend told me I should go to Larabee Wire because they were hiring summer help. I did, and I worked all summer. When my 2nd year of college was over, I went back, and they put me to work as a machine operator. The next year the same thing happened and when I left at the end of summer, they told me if I wanted a job when I graduated to come back and see them.

After I graduated, I took the summer off and then went back to see them in the fall, which started my career at Larabee Wire. That was 1977 and the first of 44 years of working in the bare wire manufacturing industry. Unfortunately, Larabee went out of business, and I worked as Decommissioning Engineer helping to close the facility. Then I joined Omega Wire and opened the OWI plant in Camden as the Production Manager and Process Engineer.

After 5 years at the OWI plant in Camden, I made a career move and took the position of Manager of Engineering at Oswego Wire, where I worked for 10 years. Later Fisk Alloy Conductors offered me the position of Manager of Engineering and Manufacturing when I opened a new plant for them in Oriskany, NY. Along the way, I got my degree in Mechanical Engineering from Syracuse University.

Even though I left International Wire for quite a while, I knew I would be welcomed back because of the family culture which existed in the company. So, in 2010 I returned to IWG. For the last 11 years of my career, I have worked as a Quality Manager and the Senior Process Engineer at IWG Camden Wire. I built a great career at IWG, and this year I plan to retire. My friends own a winery and I look forward to learning winemaking and tasting with them, as well as golfing and "the beach life" with my wife at Venice beach in Florida."

Brian Gafner, Senior Process Engineer at IWG Bare Wire Division

"After getting a qualification in secretaryship and accounting in 1989, I started working as an Accountant for a small company, which produced industrial products. In addition to accounting, I dealt with sales, purchasing, logistics, and took care of the warehouse. In 1994 I started attending a "GOAL" training course, organized by FIAT (now Stellantis). I worked in that company until 1996, and then my career took a new turn.

In 1996, after passing two interviews, I was offered a job at Italtrecce. I started with a three-month probationary period and then, to my delight, got an open-end contract. During the probationary period, in addition to attending the "GOAL" course, I substantially expanded my responsibilities and started working at the warehouse and at the production department in order to understand how and what was produced and sold by Italtrecce. Then I worked my way up and I started dealing with new clients and other products, besides the ones sold to FIAT. I started handling sales activity and preparing commercial offers.

In 2002 I was offered the position of Sales Manager. I proudly accepted this new role which I still hold now with pride and satisfaction. Since that moment, I started traveling to clients, visiting their production sites, pursuing new projects, and finding applications for our products. Working with the Automotive, Railway, and Green Energy sectors is the most satisfying.

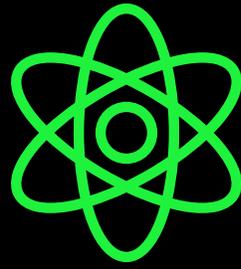
In the Sales Manager role at Italtrecce, I continue to work in collaboration with my European colleagues, who are members of the International Wire's big family, carrying out all the group's new policies, improving my performance, and contributing to the performance of our company. Given my expertise and knowledge in line manufacturing, I also coordinate the production activities in collaboration with the department managers (stranding, braiding, connections assembly, cut, etc.).

In May 2022, I will celebrate 26 years in Italtrecce. I would like to thank my family: my two daughters Eleonora and Emanuela, and my husband Ettore, who always supported me in my professional career. I am grateful for the opportunities given to me during all these years by Italtrecce and proud of my role in the company.

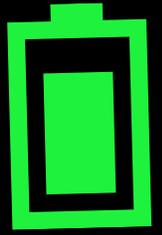
Pina Direnzo, Sales Manager at IWG Italtrecce



EMERGING MARKETS



ENERGY STORAGE



Battery Energy Storage



Battery storage, or battery energy storage systems (BESS), are devices that enable energy from renewables, like solar and wind, to be stored and then released when customers need power most. Battery storage

technology has a key part to play in ensuring homes and businesses can be powered by green energy even when the sun isn't shining, or the wind has stopped blowing.

The EIA has forecast that electric power markets in the United States are undergoing significant structural change that will result in the installation of large-scale battery storage with the ability to contribute 10,000 megawatts to the grid between 2021 and 2023—10 times the capacity in 2019. The costs of installing and operating large-scale battery storage systems in the United States have declined 72% since 2015, which supports further growth in the segment.

Copper in Energy Storage

The average copper content is about 400 lbs/MW for Energy Storage Technology.



Cabling



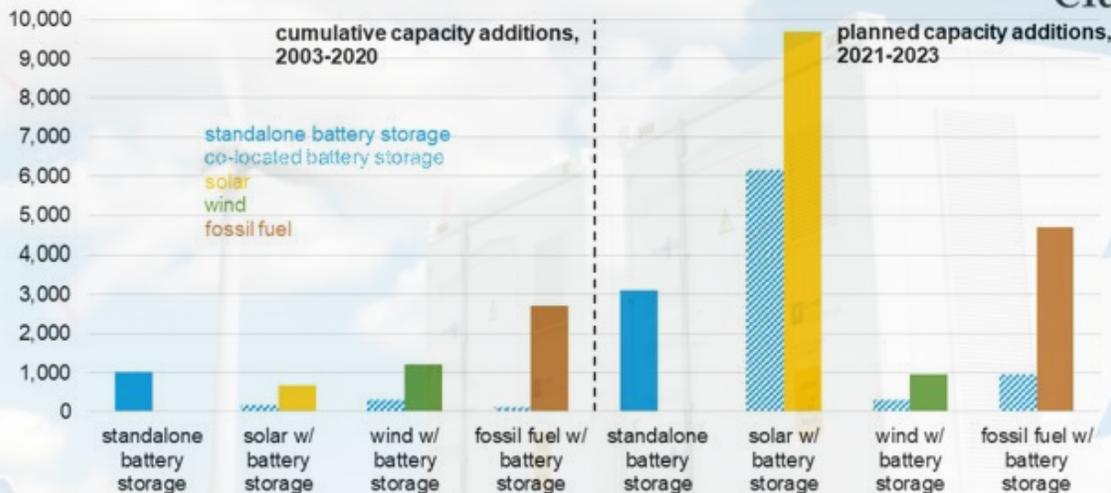
Wiring



Switches

Source: www.copper.org/environment/sustainable-energy/energy-storage/

U.S. large-scale battery storage power capacity additions, standalone and co-located megawatts



Source: U.S. Energy Information Administration

Note: Solid yellow, green, and brown bars indicate generating total capacity of solar, wind, and fossil fuels that have battery storage on-site.

Battery Energy Storage CAGR 2020 - 2027



Source: www.grandviewresearch.com

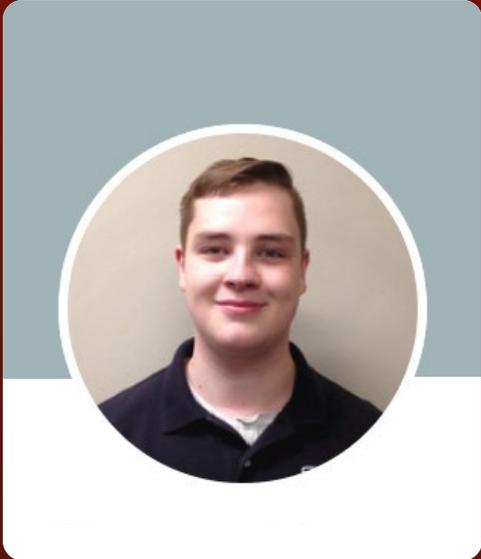


INTERNATIONAL WIRE

Industry 4.0 News



INDUSTRIAL Internet of things



Meet Keegan Matteson, IWG's A.I. Engineer Trainee

IWG has recently embarked on an initiative to apply artificial intelligence and machine learning to conventional manufacturing. Keegan's role is to expand and accelerate this initiative and help lead these projects. Keegan's innovative and entrepreneurial spirit will help shape the future of wire manufacturing and operations at IWG as he leads projects implementing industry-leading technology and possibly patentable solutions to bring AI to IWG.



IWG's Ai Vision:

Use advanced technology and data analytics to drive continuous improvement and modernization within our factories.

Vision System

Digital image processing is changing the way we think about automation and quality assurance at IW. Online cameras, optics, and sensors can be used to capture images that software algorithms analyze down to the pixels, and output real-time information on the process.

Applications in Wire Manufacturing:

Online monitoring of:

- Spooling
- Stranding
- Plating
- Wire Surface

