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PUBLISHER

Glen Hobson 205-441-5591 glen@tipsmag.net

ASSOCIATE PUBLISHER

Steven Goodwin 205-624-2181 steve@handfmedia.net

ADMINISTRATIVE DIRECTOR

Steven Hobson steven@tipsmag.net

EDITOR

Brandon Greenhill brandon@handfmedia.net

**CREATIVE/ WEB DIRECTOR** 

Jacklyn Greenhill jacklyn@handfmedia.net

P.O. Box 1568 · Pelham, AL 35124 Phone: 205-441-5591 · Fax: 205-624-2181 www.theutilitysource.net info@theutilitysource.net



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## **TUS** · Company Profile

Name: Pelsue

Founded: 1963

Headquarters: Englewood, Colorado, USA

Industry: Safety Equipment, Telecom & Utility Equipment, Worksite Solutions

#### Overview:

Pelsue designs and manufactures worksite equipment focused on worker safety, productivity, and efficiency. The company is especially known for its solutions supporting underground work (like confined space entry and fiber optic splicing) and telecommunications maintenance. Pelsue serves industries such as utilities, telecommunications, aerospace, transportation, and construction.

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## Novatech Automation Meets Growing Demand for Networking with Substation-Hardened Layer 2 Gigabit Ethernet Switches



NovaTech Automation, the leader in substation automation for the US electric grid, is excited to announce the release of the Hermes 2000 series of utility-grade Layer 2 Ethernet switches, enabling NovaTech to deliver a broader array of digital substation solutions to its utility customers.

The Hermes 2000 Gigabit Ethernet switches feature 28 ports and meet IEC 61850-3 standards. Available in various configurations of copper and SFP ports and operating voltages, Hermes 2000 switches are designed for mounting in 19" racks.

#### NovaTech's CEO, Conrad Oakey, expressed enthusiasm for the new products:

"The recent introduction and strong response to the OrionVX – the server-deployed version of our popular OrionOS for substation automation platform - highlighted a customer need and an opportunity to provide robust network solutions suitable for the performance, cybersecurity, and environmental demands of the modern digital substation – all backed by responsive service that our customers love. Hermes 2000 broadens the offering for NovaTech customers and expands our capabilities for turnkey system engineering solutions."

At a time when the demand for robust, integrated communication and automation solutions in the energy sector is growing rapidly, NovaTech's customer-centric culture promises to deliver powerful solutions that address the challenges of electric grid modernization.

#### About NovaTech Automation:

NovaTech is a global leader in providing automation equipment for the electric grid, helping utilities enhance grid reliability, safety, and efficiency. Their solutions drive the modernization of critical infrastructure and support the transition to a smarter, more resilient energy system. For more information, please visit:

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Cogeneration Plants: Deterring Strainer Corrosion with FRP Strainers Constructed of Fiber-Reinforced Plastic (FRP) Are Designed to Resist Corrosion at a Fraction of the Cost of Special Stainless Steels



Cogeneration plants, also known as Combined Heat and Power (CHP), are used globally with a significant presence in Europe, North America, and Asia. In Europe, countries like Germany produce a substantial share of electricity through cogeneration, representing approximately 31% of total CHP electricity production in the EU. Asia and South America are experiencing rapid growth in the cogeneration market, indicating a global trend towards adopting CHP systems.

Cogeneration plants require cooling systems to dissipate excess heat, and seawater cooling is a method employed, especially in coastal regions. This approach involves drawing seawater into the plant, circulating it to absorb heat, and then discharging the warmed water back into the sea. Seawater provides a plentiful and accessible cooling medium for coastal facilities. In the system design, industrial strainers are essential for screening out debris and large particulates from seawater to protect crucial downstream equipment and processes. The strainers are used not only in the treatment of seawater but also to remove debris from cooling tower or process water.

However, the saline nature of seawater can lead to corrosion of plant equipment like strainers, neces-

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©2023 COOLSHIRT SYSTEMS, 401 Westpark Court Suite 200, Peachtree City GA 30269 Office: 800-345-3176 Fax: 678-289-4325 www.coolshirt.com sitating the use of corrosion-resistant materials and increasing maintenance costs. Implementing seawater cooling requires careful design to mitigate environmental impacts, such as incorporating cooling towers or heat exchangers to reduce discharge temperatures. Additionally, material selection is crucial to prevent corrosion, often involving the use of specialized alloys, protective coatings, and increasingly Fiber-Reinforced Plastic (FRP).

"Today, a much more cost-effective option is to utilize Fiber-Reinforced Plastic strainers that are specifically designed to be resistant to corrosive environments at a fraction of the cost of duplex or super duplex stainless steels," says Robert Presser, Vice President of Acme Engineering Prod., Inc., a North American manufacturer of industrial self-cleaning strainers. The company is an ISO 9001:2015 certified manufacturer of environmental controls and systems with integrated mechanical, electrical, and electronic capabilities.

FRP is a composite material made up of polymer supported with fibers for added strength. FRP is already widely utilized for applications such as the power plant piping used to carry seawater for once-through process cooling.

OEMs are now utilizing FRP in cogeneration plant applications where superior corrosion resistance is required at lower cost. As an example, Acme offers the option of using exceptionally corrosion resistant FRP for external strainer construction, including the pressure vessel itself. The internal mechanism is still manufactured with super duplex or similar steels.

Due to the FRP's strength, the material can also be used to build to ASME BPVC Section X standards, which establishes requirements for the fabrication of fiber reinforced plastic pressure vessels. Acme has already utilized FRP for pressure vessel applications up to 300 PSI.

"Cogeneration plants can save approximately half the cost or more when the strainer's intake vessels and piping are built with FRP, and only the internals are constructed with super duplex," says



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To meet industrial requirements, Acme's FRP division designs and manufactures various types of FRP, simplex, duplex, automatic scraper, and backflush filters. To help ensure compliance with specifications, the OEM provides detailed engineering, including 3-D modeling of FRP piping, piping flexibility/general stress analysis, and piping layout/isometrics. In addition, the OEM provides complete skids with piping, valves, and instrumentation along with PLC control, as needed.

According to Presser, an automatic, self-cleaning, scraper strainer is often used with FRP construction when cost-effective corrosion resistance is necessary and minimal oversight desired. In the case of the OEM's automatic scraper strainer, a motorized unit is designed to continually remove both very large and very small, suspended solids from seawater, wastewater, and process streams.

Cleaning is accomplished by a spring-loaded blade and brush system, managed by a fully automatic control system. Four scraper brushes rotate at 8 RPM, resulting in a cleaning rate of 32 strokes per minute. The scraper brushes get into wedgewire slots and dislodge resistant particulates and solids. This approach enables the scraper strainers to resist clogging and fouling when faced with large solids and high solids concentration. It ensures a complete cleaning and is very effective against organic matter "biofouling."

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Although cogeneration plants have long employed industrial strainers constructed of special stainless steels to resist corrosion, utilizing FRP can be just as effective at a much lower cost. When used with advanced, self-cleaning scraper strainers, downstream equipment and processes can be effectively protected for the long term without premature component replacement or excessive oversight.

For more info, visit Acme Engineering Prod. Inc. at acmeprod.com; phone Robert Presser, Vice President at: 518-236-5659; fax: 518-236-6941; mail Acme at Trimex Building, Route 11, POB 460 PMB 10, Mooers, New York 12958. In Canada phone: 514-342-5656; fax: 514-342-3131; mail them at 5540 Rue Paré, Mont-Royal, QC H4P 2M1.

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