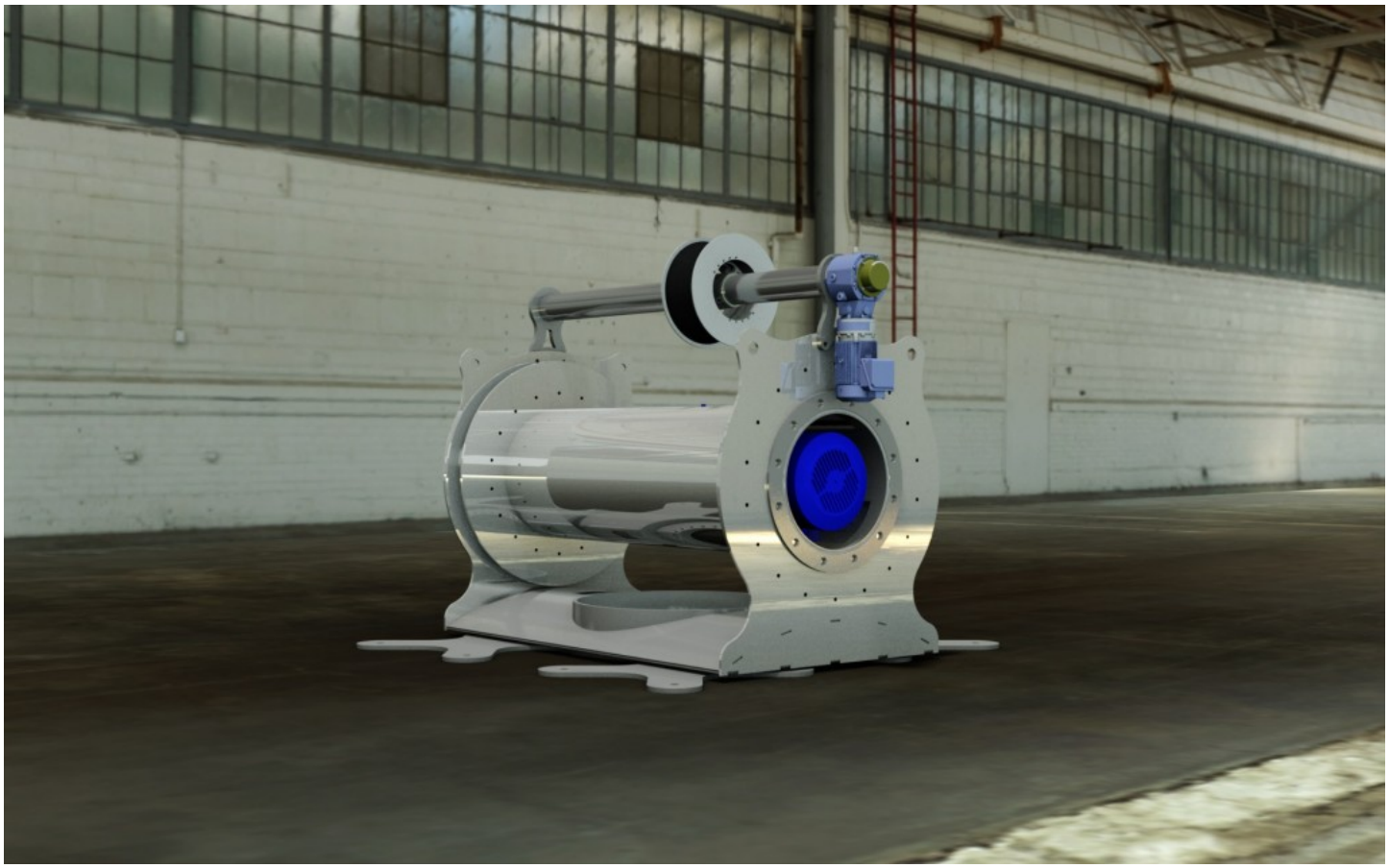
Woods Hole Oceanographic Institution Demonstrates New Compact Electric Winch



Barnstable Town, Oct 19, 2018 (Issuewire.com**)** - Both commercial and research marine operations rely on winches for deployment, hauling, and retrieval of equipment and instruments. Over the years, winch design has undergone extensive advancements in control systems while at the same time structural changes have been few and far between. Woods Hole Oceanographic Institution (WHOI) engineers James Haley and Josh Eaton thought it time to incorporate mechanical advantage to build on the capabilities of innovative control systems. “The WHOI Compact Winch is the most advanced portable winch design in the world,” says co-inventor James Haley. Each component was designed and fabricated to serve multiple purposes with the goal of creating a smaller, lighter, and more compact winch, capable of outperforming its heavier and bulkier predecessors.

Currently available winches are customizable, however, they are typically built for a specific use and a particular tension member diameter and type. The WHOI Compact Winch was built for adaptability- capable of replacing any winch design currently in use- regardless of application. Because of the strength to weight ratio and the ability to spool any size tension member, users will have the ability to change diameters and tension member types on the fly, going from thread lay to open lay, either onsite or from a remote location.

The winch is designed to work in conjunction with a portable turntable- another WHOI innovation -eliminating the need for custom baseplates and allowing for flexibility in deck placement, movement,

and application. While conventional winches are immobile once installed on deck, and require heavy equipment to turn or rotate, the WHOI Compact Winch is easily hand-rotated, a full 360 degrees, and locked into place quickly and easily with a lever positioned on the base.

The winch was built with utility in mind – creating a unit with much a smaller footprint and a higher strength to weight ratio. Featuring a frameless build, the winch motor is housed entirely within the winch drum allowing for a smaller on-deck footprint. With the open-air design of the drum- air flow is permitted and the motor is forced ventilated for cooling. Quick and easy maintenance is as simple as sliding the motor from the winch drum.

The structure of the winch was designed for manufacture with a slotted and tabbed design, utilizing readily available components, reducing the assembly and manufacturing process from a few weeks to a few days. Additionally, the design features a unique level wind system- capable of being rigged to avoid the constraints of the fleet angle. In addition to its many mechanical innovations, the winch also works in conjunction with an external control cabinet for use with multiple winches and to control numerous mechanical components.

The Compact Electric Winch was originally designed for moorings where high-strength, high-volume tension members must be accommodated but was designed with scalability in mind and is applicable to both marine and terrestrial applications, allowing for customization based on unique needs and challenges. The design is expected to be beneficial within the oil and gas industry- where power & strength is needed but space on rigs is limited, on marine vessels where many winches can now be replaced with one multi-purpose unit, and it could also be scaled down for use in non-marine applications.

The Compact Winch and Portable Turntable designs are currently protected under three pending patents.

On Wednesday, October 17, 2018 – the Compact Electric Winch was successfully tested and demonstrated before a group of industry professionals representing some of the largest marine winch manufacturers.

WHOI is a private, nonprofit research and higher education facility dedicated to research and education to advance understanding of the ocean and its interaction with the Earth system, and to communicating this understanding for the benefit of society.

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