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Buckeye Shapeform Facilitates Navy Ship Transfer Program with Custom Enclosures

To facilitate the US Navy's Ship Transfer Program, which offers retired Navy and Coast Guard vessels to allied nations, Ursa Navigation Solutions, Inc. was charged with engineering a product to replace the AN/WRN-6 militarized GPS radio navigation system. The problem with the WRN-6 was two-fold. First, its capabilities made it a classified piece of equipment that could not be released to certain countries. Second, the more than 20-year-old technology had rendered the equipment obsolete and difficult and expensive to support.

Ursa's primary task was to engineer a product that would allow a commercial GPS system to interface with the legacy navigation and weapons system onboard the ships. Ursa's engineers also needed to take into account the environment in which this product would be used, including the harsh conditions that put a great deal of stress and wear and tear on equipment.

The uniqueness of the product combined with the need for durability demanded that the product engineers look beyond off-the-shelf options for an enclosure solution. In addition, the fact that the new navigation system would be used in military applications required a supplier with expertise and experience in the military arena.

"I couldn't just order a ready-made enclosure for this product," said Bill Woodward, Ursa's Principal Engineer. "I needed a supplier with a variety of cases to choose from, as well as the ability to customize a case to my product specifications."

Woodward found Buckeye Shapeform via an Internet search. Based on Buckeye's customization capabilities and the company's status as a supplier for military companies, Bill selected the firm to create two enclosures for the new UrsaNav UN-100 product, which would serve as the replacement for the WRN-6.

Two separate enclosures were selected for the UrsaNav UN-100, one for the main navigation unit and a second, smaller enclosure to house the remote, which served as an operator interface. The purpose of the main navigation unit is to provide a gateway between the commercial GPS and the ship's on-board navigation. The SM series enclosure was selected for this part of the product.

To complete the SM series case, Buckeye Shapeform employed its machining capabilities to punch holes in the enclosure, allowing each individual component to be seamlessly joined together for an attractive final product. Buckeye designed a custom internal chassis for mounting product components inside the enclosure, which eliminated the need for punching holes in the bottom panel.

The remote or operator interface portion of the product allows ship personnel to view navigation and GPS data and control the main unit. Buckeye selected the compact, customizable E-series enclosure for the remote. Buckeye modified both the front and rear panels of the case and created a custom swivel mount stand, which allows the remote to be tilted for easy viewing while sitting on a desk or mounted to a wall. Buckeye's finishing touches included imprinting "Ursa Navigator" on the unit and labeling the holes on the remote, which helps operators easily identify the function of each button. Finally, Buckeye powder coated both pieces to provide an attractive and durable finish.

The UrsaNav UN-100 is currently on the market as a viable replacement for the AN/WRN-6 and can be used without additional changes to existing shipboard systems. It has been successfully installed on two Greek and two Egyptian mine hunter vessels. Thanks to Buckeye Shapeform's role in the project, Ursa was able to quickly and affordably obtain the effective, customized enclosure solutions it needed.



Power

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Hardware

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EMI Filter Series Combines Power Entry Functions To Reduce Assembly Time

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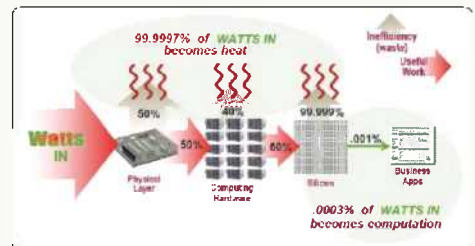
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