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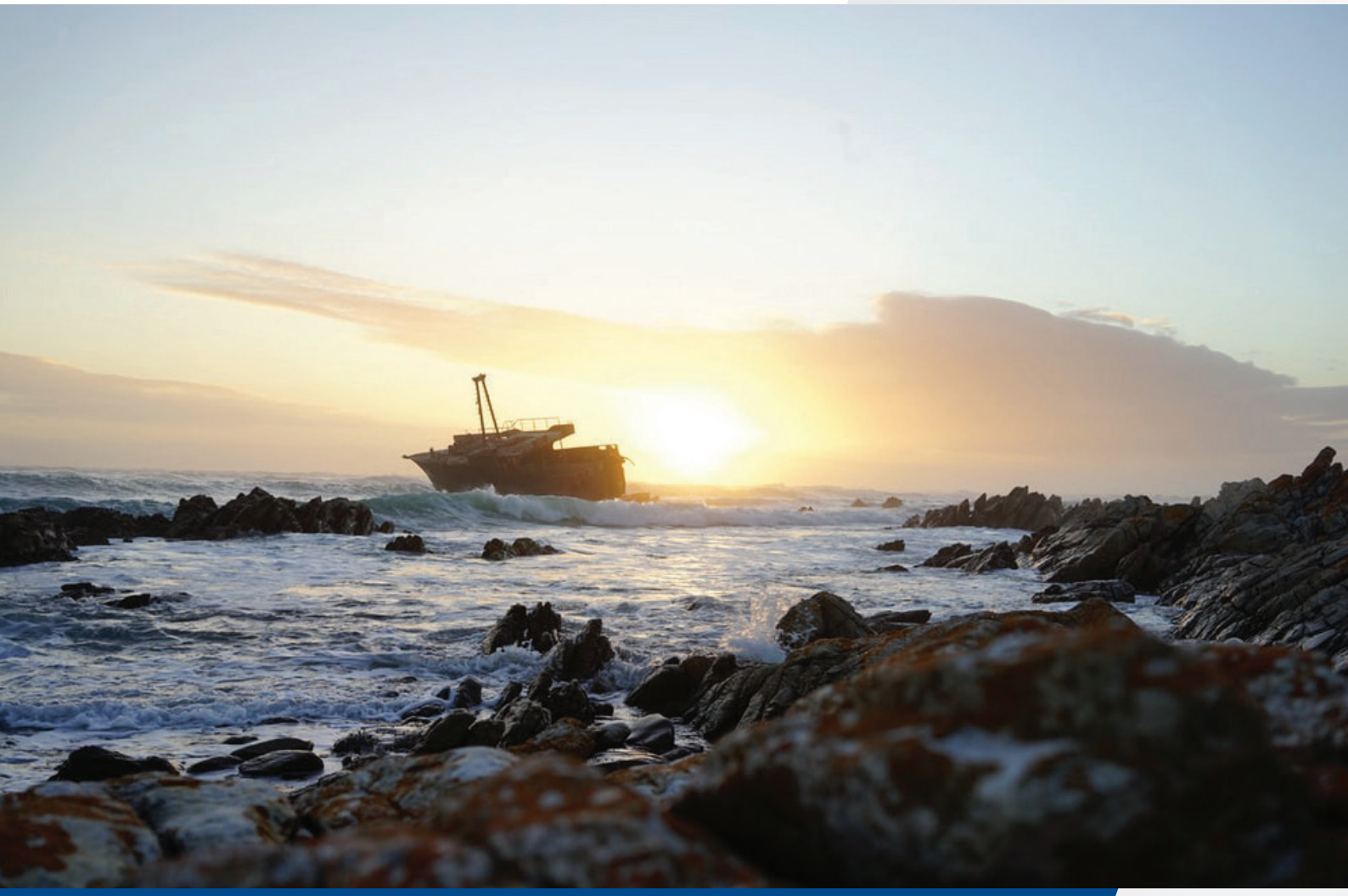
CASE STUDY

Wreck Marking: Ensuring Safe Future Navigation in West Africa



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Project Overview

Application
Wreck Marking Project

Product
SL-B1500 buoys in Isolated Danger, New Danger and Special Mark configurations with moorings; SL-C415 lanterns

Location
Undisclosed location, West Africa

Date
2019

Background

Shipwrecks pose a very real threat to both navigational safety and the marine environment. Their impact can be significant, particularly when they come to rest in shallow waters.

The presence of a wreck impacts the water channel by redirecting sediment around the wreck rather than sending it back to shore in its natural pattern.

This disruption causes instability and rapid erosion along the coastline. It can also result in the collapse of vegetation and infrastructure, significantly impacting the lives and wellbeing of local people.

Wrecks are a real problem for an undisclosed region of West Africa, where up to 100 abandoned vessels are positioned along the coastline.

This number is constantly on the increase, as many poorly maintained and barely seaworthy transport vessels operate in the area. When disaster strikes, these vessels are often left unclaimed by owners, leaving authorities to initiate the clean up.

IALA guidelines recommend the deployment of emergency wreck markers within 24 to 72 hours of the wreck occurring, followed by a more permanent buoyage such as isolated danger marks or cardinal marks. Navigational charts should then be updated accordingly.

Challenge

West Africa recently introduced an act applying to the receipt and removal of shipwrecks in the region.

"The Sealite products used were of good construction, easy to assemble, and were supplied with hardware and tools to assist with assembly. The instructions provided for setting the lantern characteristics were easy to read and follow."

– Lionel Cooper
Managing Director
Axcess Marine Contractors Ltd

A National Maritime Administration was appointed to facilitate the assessment, marking, and removal of wrecks within a strategic timeline.

The project was to undertake the marking of long-standing wrecks within four main pilotage districts.

Factors needing to be considered were:

- The harsh tropical conditions.
- The aggressive wreck-marker flash character requirements for the lantern to achieve a range of 5NM.
- The high risk of local theft and vandalism.

Above all, the main aim of the project was to ensure the highest level of safety for vessels navigating within these four districts.

Solution

In partnership with our approved local installation partner, **Axcess Marine,** Sealite helped to define the project requirements and subsequently selected the most suitable equipment for the installation.

Axcess Marine were able to apply their local knowledge of the region to the task. This was vital information given the challenges of its location and the tough climatic conditions.

The **Sealite SL-B1500 marine buoys** and **SL-C415 marine lanterns** in isolated danger mark, new danger mark and special mark arrangements with accompanying moorings were chosen for the project.

SL-B1500 buoys were selected for the following reasons:

- High visibility, durability, and extended service life of up to 20 years.
- Its single piece, rotationally moulded float incorporates internal stainless-steel bracing that is linked between the lifting and mooring eye. This evenly disperses any stress across the buoy.
- Reduced weight allows for smaller vessels to be commissioned, helping to reduce operational costs.
- Self-standing design is more stable, reducing the risk for crew on board the vessel.
- Like all Sealite buoys, they use UV stabilised, Virgin Polyethylene. This means the buoys will never require painting and will retain their vibrancy for many years.

The **SL-C415 marine lanterns** were chosen and matched to a larger battery than is standard. This was required due to the tropical climate and the aggressive flash character needed for wreck markers. These customisations enabled Sealite to

achieve the range of 5NM the project required.

The SL-C415 lantern collects light from all angles using the four premium-grade solar modules integrated into its assembly. The light can be seen clearly from above when passing the AtoN due to its tough polycarbonate lens.

To help support regional jobs and the wider community, concrete sinkers were sourced and fabricated locally.

Anti-theft hardware was also used to protect against the threat of local theft and vandalism with the unprecedented rise of incidents in recent years, throughout the African region.

Outcome

The product know-how of Sealite combined with the local experience of Axcess Marine meant a timely, cost-effective solution was delivered. This solution met all the requirements of the project outline.

The supply of wreck markers, moorings, and a custom lantern battery demonstrates Sealite's ability to deliver bespoke solutions, no matter the individual project needs.

The newly installed wreck markers in the four main pilotage districts now help ensure the highest level of safety for marine vessels. At the same time, the process to initiate the breakdown and removal of dangerous regional wrecks can proceed unhindered.

All Sealite products are manufactured to exacting standards under strict quality control procedures. Sealite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader. By choosing Sealite you can rest assured you have chosen the very best.

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- **Precision Construction**
- **Total Quality Management**
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- **Rapid Turnaround**

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