

Capesize Bulk Carrier

GH Resources

Project type	Tank top, hopper and bulkhead stool reinstatement
Area	5,100m ²
Design	10-20-E*
Productivity**	25 days / 200 m ² per day
Date	December 2007
Yard	Huarun Dadong Dockyard, Chong Ming Island, China
Owner	Wallem Ship Management Ltd
Class	Lloyds Register

Summary

- Using SPS Overlay for this work on the GH Resources:
- Significantly reduced the repair schedule
 - Delivered strengthened surfaces, highly resistant to impact loads
 - Was the first SPS Overlay on a Capesize bulk carrier

Objectives

The GH Resources is a 123,503 dwt, Capesize vessel built in 1990. It was suffering significant steel diminution which required tank top reinstatement over seven holds including bulkhead stools and hopper sides, totalling 5,100m².

Details

The SPS Overlay process is dramatically faster than conventional crop and repair techniques. These repairs to the GH Resources required about 40% less steel and reduced working hours by about 80%.

The SPS Overlay process is faster because it leaves the existing tank top in place and uses the worn steelwork as part of the repair. On GH Resources there were no removals, limited tank cleaning and only basic plate fitting and welding were required.

The reinstated surfaces of GH Resources are now highly resistant to impact loads such as grabs and bulldozers. Being a composite, SPS Overlay properties include greatly enhanced impact absorption compared to conventional steel structures.

Capesize managers are looking to keep their vessels trading safely for as long as possible. This work on the GH Resources demonstrates that SPS Overlay is a fast and highly effective repair solution, which can significantly reduce downtime.



“We have been monitoring bulk carrier repairs using SPS Overlay for some time. This new technology offers a very interesting alternative to time-consuming conventional repairs. We are very pleased with the outcome.”

Laxman Kumar, Wallem Fleet Manager

*10-20-E refers to the specification of SPS Overlay used, in this case 10mm new steel - 20mm elastomer - existing steelwork.

**Productivity refers to SPS Overlay injection process, for more information see Typical SPS Overlay Application overleaf.

Product Specification

SPS Overlay

Fast

Short repair schedules, minimal labour and reduced downtime

Non-disruptive

Safe, flexible, permanent improvements

Economic

Reduced repair costs; lower operating costs and increased revenue potential

SPS Technology

SPS Overlay uses existing corroded or worn plating as one side of a steel composite panel formed by a new top plate and an elastomer core. The resulting composite fully restores or enhances the strength of the original structure.

SPS Overlay is the marine repair application of the patented Sandwich Plate System (SPS) technology and is approved globally by the Classification Societies.



Fully Supported Solutions

SPS Overlay has over ten years experience designing, securing regulatory approval for and executing SPS projects. We work with you, and your selected yard, to ensure an effective, efficient repair, anywhere in the world.

Typical SPS Overlay Application

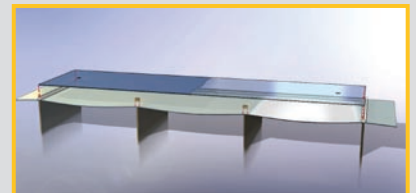
1 Prepare existing surface

Grit blast and clean



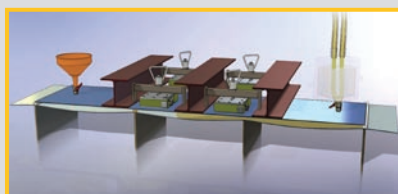
2 Create cavities

Weld perimeter bars and new top plate to form an airtight cavity



3 Inject Elastomer

Temporary restraint beams positioned and cavities filled



4 Repair complete

New, flat, impact and vibration resistant surface

