

SCIGRIP Transforms Griffon Hovercraft Assembly Process with SG230HV Structural Adhesive

World renowned Griffon Hoverwork, a designer and manufacturer of technically advanced hovercrafts, has collaborated with SCIGRIP in the development and production of their latest vessel.

The Project

Griffon's 12000TD is a 22 metre passenger craft and represents a significant shift in manufacturing techniques for the UK hovercraft company.

The 12000TD craft has been specially commissioned by Hovertravel, the world's longest running commercial hovercraft service that offers the fastest way to cross the Solent between Southsea, Portsmouth and Ryde, Isle of Wight.

Traditionally, Griffon Hoverwork has adopted welding methods to assemble the key components of their vessels. However, this method can result in heat distortion that leads to dimensional instability and other problems such as porosity or localised stress points.



The Solution

SCIGRIP SG230HV SOLVES THE PROBLEM

Griffon Hoverwork approached SCIGRIP to identify a suitable structural adhesive solution that would eradicate this problem. Griffon vessels are used in some of the most diverse and inaccessible areas of the world from the jungles of South America to the frozen seas of the Baltic and Arctic. It was therefore critical the adhesive system they selected could withstand harsh and demanding conditions.

SCIGRIP specified SG230HV, a high strength structural bonding system developed especially for marine applications. The two-component, high viscosity MMA adhesive was trialled with success and used to bond the 12000TD's aluminium floor to the aluminium super-structure.

This operation was carried out using pneumatic dispensing guns by a team of operators trained onsite by SCIGRIP. This allowed a great deal of flexibility ensuring access into difficult and restricted areas.

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SCIGRIP SG230HV SOLVES THE PROBLEM, CONT'D



SG230HV can be dispensed in a variety of bond-line thicknesses and gives the user greater flexibility during application. It has over 100% elongation and a tensile strength of 21-24 Mpa which makes it an ideal structural bonding solution for many applications where fatigue performance is required.

When bonding SG230HV to aluminium parts, a surface primer must be used to prepare the surface. SCIGRIP's MP100 Metal Primer can be applied in a simple brush or wipe and is formulated to clean, chemically convert and prepare the surface for permanent bonding, significantly improving the long-term durability of the adhesive bonds, especially those that are subjected to humid or corrosive environments such as salt water or salt spray.

"Griffon Hoverwork's success and reputation is based upon our commitment to design and manufacture hovercrafts that perform in the most challenging of environments. SCIGRIP's SG230HV provided a reliable and effective assembly solution that matched these requirements. The fact the product is Lloyds approved added an additional level of assurance and was a significant factor in our selection process", comments Mark Downer, Chief Engineer of Griffon Hoverwork.

Hovertravel successfully completed sea trials on two 12000TD craft constructed with SCIGRIP's adhesive bonding techniques.

The hovercrafts entered into service in the Summer of 2016.

www.griffonhoverwork.com