CULLUM MARINE

X Craft – Sea Fighter

Exhaust System

The United States Navy Office of Naval Research commissioned the design and build of an experimental vessel.

This was used to demonstrate to the US and other navies the versatility of a very high speed vessel which could cross oceans quickly, and operate in shallow coastal waters.

The vessel known as X-Craft, and later the Sea Fighter is a 1000 tonne catamaran. The aluminium catamaran is one of the fastest vessels in the US Navy fleet.

Cullum designed and manufactured the exhaust systems for the GE LM2500 gas turbines. The gas turbine exhaust system is a rectangular duct without any silencing or cooling. It discharges through the ship side aft of the air intakes.

Due to the close proximity of the intake and exhausts, and the fact that the discharge was close to the flight deck, a series of wind tunnel tests were carried out to assess the exhaust smoke path and its concentration on the flight deck and working area. The results of the tests showed there was no problem with cross flow between the intakes and exhausts and the effects of smoke on the deck and working areas were acceptable for helicopter operation

Engine Type

- **Two GE LM2500 gas turbines, one in each hull**

Cullum scope included:

- **Complete shock resistant exhaust system**

Adams Close, Heanor Gate Industrial Park, Heanor, Derbyshire DE75 7SW England
T +44 (0)1773 717341 F +44 (0)1773 760601 E sales@cullum.co.uk
www.cullum.co.uk