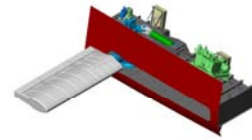
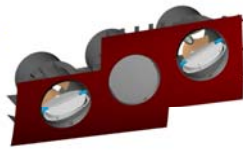




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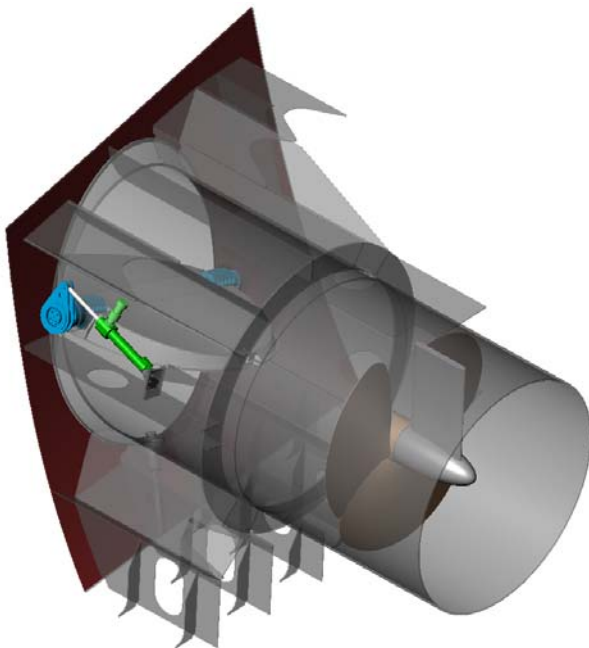
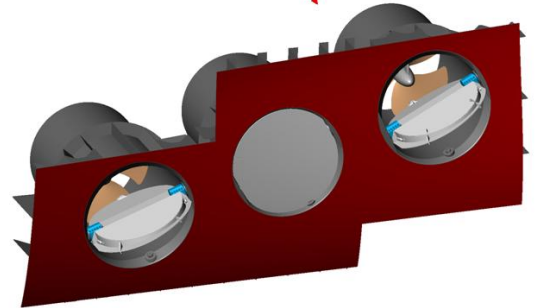


Engineering for Marine Equipment



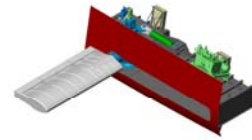
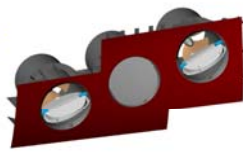
Special ship fitting systems

COVERS for BOW THRUSTER TUNNELS



Covers for bow thruster tunnels are one of the types of equipment designed and built by the FL Marine Department (previously ACH Engineering) to satisfy special requirements from owners and/or ship builders. This equipment has been fitted on board the oceanographic vessel "MARION DUFRESNE II" for tunnels 1.5 m in diameter. ACH Engineering has also delivered tunnel doors for one of the biggest cruise liners ever built, the "QUEEN MARY II". These doors were fitted to three tunnels with a diameter of 3 m.

The equipment consists of two sets of two symmetrical doors or shutters for closing the openings in the hull from two-sided thruster tunnels. They are mainly dedicated to reduce hydrodynamic drag due to the tunnel openings. The covers help to avoid disturbing noise and vibration. This system also provides significant energy savings. .



MAIN CHARACTERISTICS AND DIMENSIONS OF THE BOW THRUSTER COVERS

