Ship Sinking by Methane Bubbles

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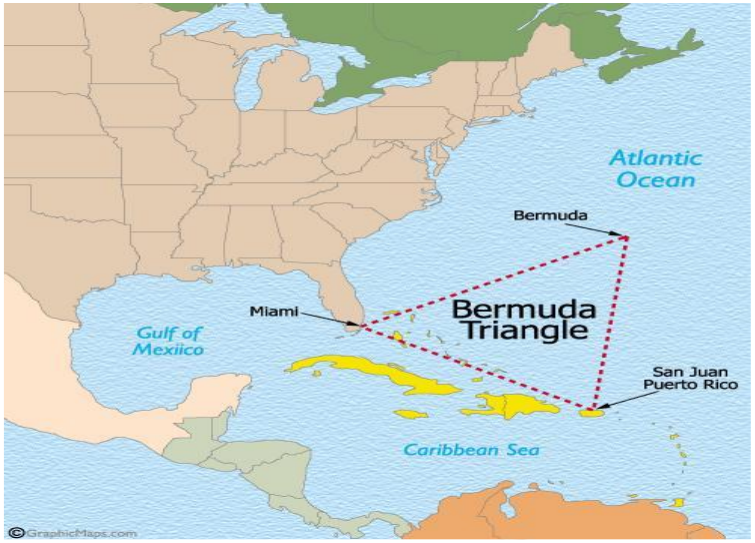
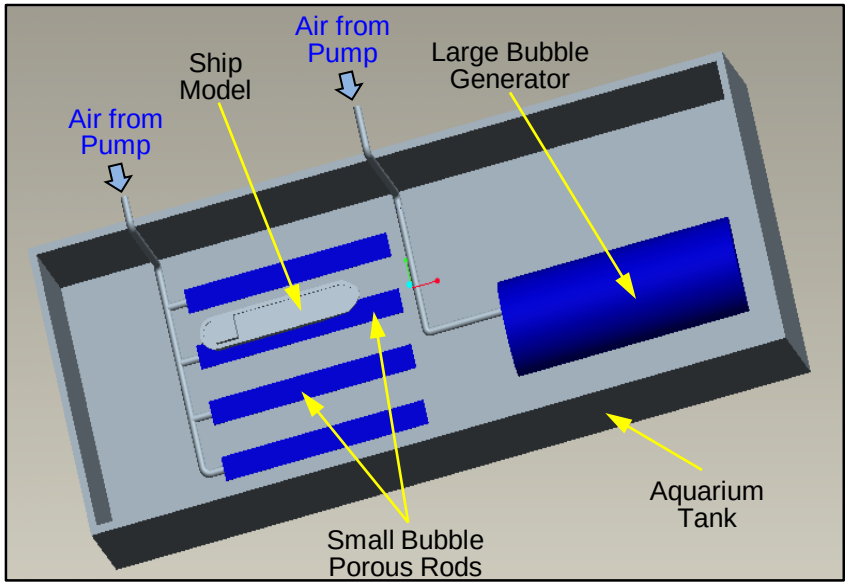
DSI :
Deep Sea Investigation

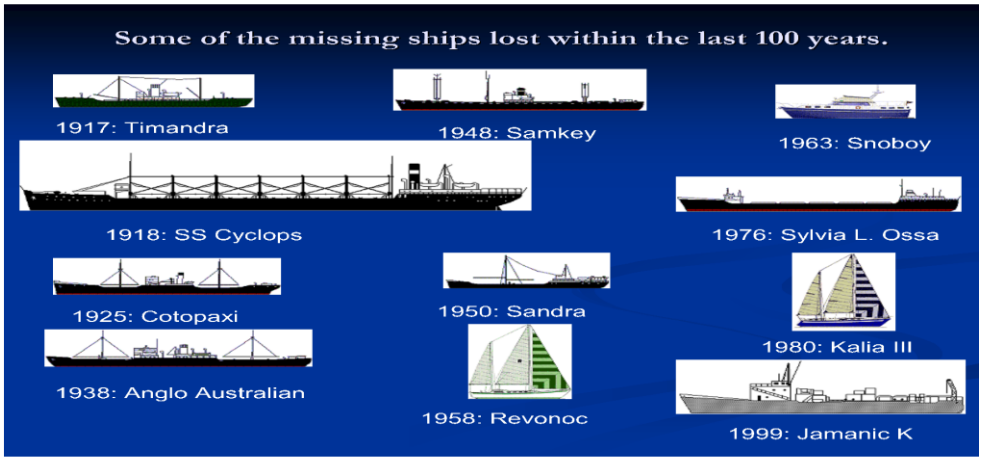
Objective:

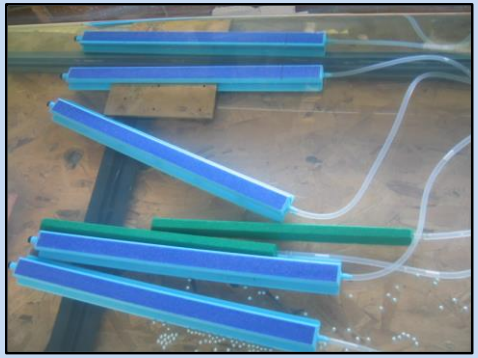
A promising theory of ship sinking in the Bermuda Triangle is rise of enormous methane bubbles from the ocean floor. To investigate this phenomenon, a carefully controlled experiment with a scaled model ship should be designed and tested using two different types of bubbles: small bubbles and one large bubble comparable to the ship size.



Test Setup







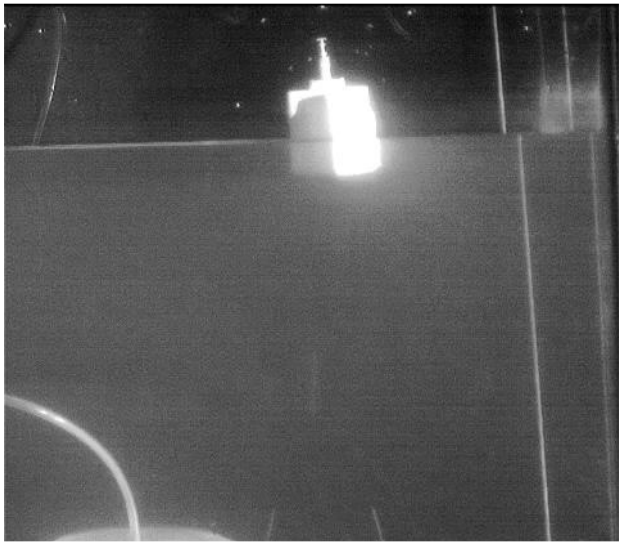
In the small bubble experiments, many tiny bubbles are generated by pumping air through six porous rods.

In the large bubble experiments, one to three large bubbles are released from a half cylinder acrylic reservoir. The reservoir is initially filled with air, then the half cylinder is open to release the bubbles.

Top View of Ship Sinking

Lateral impact crucial to the sinking

Video: Central impact – no sinking



Video: Side impact – ship sinking