



# Marcilio Dias D25

Formerly

USS Henry W. Tucker DD/R 875

# Background

- On December 3, 1973, USS Henry W. Tucker DD/R 875 was stricken from the US Navy and commissioned in the Brazilian Navy on the same day and was renamed Marcilio Dias D25.
- On September 19, 1994, Marcilio Dias was sunk by a torpedo of Brazilian design fired from Tamoio, a submarine of Brazilian design.
- Following are photos taken of the exercise.

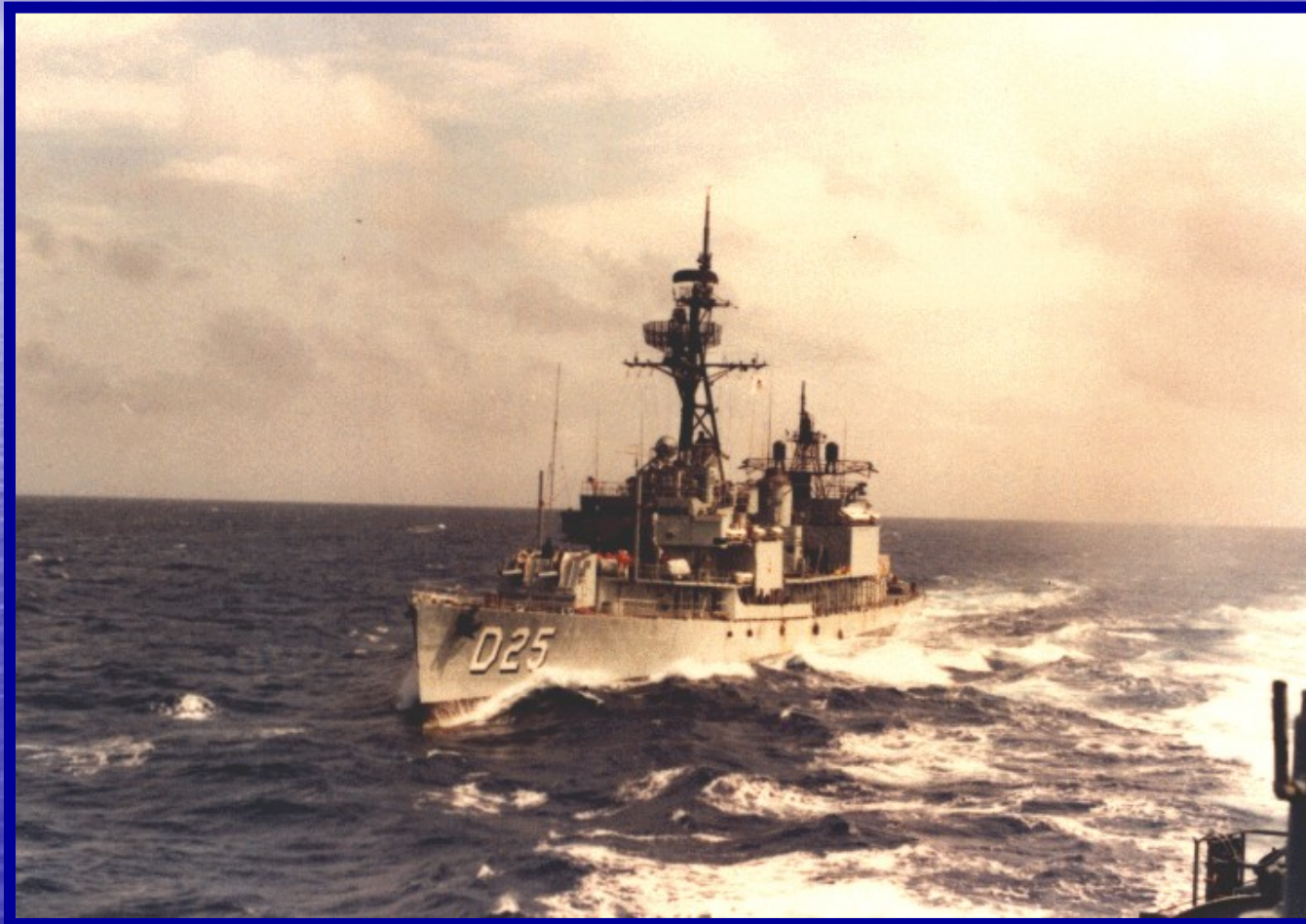
# USS Henry W. Tucker DD/R 875



# USS Henry W. Tucker DD/R 875



# Marcilio Dias D25



# Marcilio Dias D25



# From Tamoio's Periscope



Her hull was prepared for the exercise: the fuel tanks were cleaned and gas free to avoid secondary explosions, and some water tight doors and hatches were left open to force a trimmed sinking.

# Shockwave



You can see in this photo that the ship's superstructure was violently displaced abeam due to the explosion below the keel. An extremely high pressure shock wave and a huge gas bubble (from explosive products) were generated and begun to load the hull, causing HWT to bend and hull to fracture right above loading point (near bulkhead between B-3 and B-4). Smoke came out the stack suggesting that our fellow BTs were attempting to light up the ship and make her escape from that dramatic fate... but it was just soot coming out because the sudden acceleration of the shock wave.

# From Tamoio's Periscope



# Shockwave



As HWT bent upward, shock loading suddenly ceased, but expanding gas bubble kept the load on the hull, causing it to fracture more. After some milliseconds, the gas bubble shrunk and caused the hull to sag in a whipping movement. Further fracture occurred as a water jet passed through the ship.

# Displaced Superstructure



There was a second expansion of the gas bubble and it also vented through the hull. This caused the removal of the superstructure, completely breaking the ship in two parts.

# Damage Report



A Sad Ending...

