

6. Engineering.

a. Predeployment preparations.

(1) STATEN ISLAND returned from Deepfreeze '74 on 16 April 1974. All machinery was operational with the exception of number 5 main generator which suffered salt water damage due to a firemain rupture. The dockside availability commenced on 1 June 1974 for the repair by commercial contractor. The repair of number five generator was completed by 15 June 1974. A test run was started, and number five scavenging air blower was found to be faulty. The blower was rebuilt by ship's force with a factory representative present; the subsequent test run was satisfactory.

(2) The STATEN ISLAND sailed on 15 July 1974 for the Arctic West '74 deployment with all machinery operational.

b. Major or unique engineering problems.

(1) On or about 26 August 1974 hull damage was discovered in compartment A-402M and A-401A. Frames and floors in both compartments were found to be distorted. The worst of the damage was on the starboard side of compartment A-401A between frames 26 and 31. It was felt at the time that constant ice loading on the hull would not impair the icebreaking ability in solid pack ice of 3 to 4 foot thickness. The area was monitored continually during heavy icebreaking and the hull was not working during this period. However, during operations in convoy with Canadian vessels where heavy multi-year ice in pressure ridges was encountered and maneuvering situations were called for, the hull was found to be working in the area of heaviest damage. The Damage Control Division strengthened the frame web and flange plates in this area to attempt to stop the working of the hull; this repair apparently proved successful.

(2) Main propulsion experienced no major casualties and carried out routine maintenance on main engines in accordance with current Fairbanks-Morse and Coast Guard instructions. Three ship's service generators were completely overhauled during the deployment. None of the maintenance affected operational capabilities. In addition, a Full Power Trial was conducted in the Bering Sea during the latter portion of the patrol.

c. Fuel and Water Consumption (gallons):

Month	Time Underway	Fuel Oil	Lube Oil	Potable Water	Feed Water
July	15 days	91,812	1481	8202/day	755
August	31 days	131,147	1535	7615/day	2413
September	30 days	224,941	1620	7002/day	9397
October	2 days	17,200	102	8300/day	4936