

SHIPS GENERATORS TWO 500 KW CATERPILLAR/KATO AC GENERATORS IN B-1-E AND ONE 200 KW CATERPILLAR/KATO EMERGENCY GENERATOR IN B-2-E.

HEATING TWO STEAM BOILERS WITH A STEAM OUTPUT OF 7,000 LBS PER HOUR AT CONSTANT 150 PSI. BUILT BY COMBUSTION ENGINEERING. UTILIZES 12,000 GALLON WATER STORAGE.

FIRE AND BILGE PUMPS TWO FIRE AND BILGE PUMPS LOCATED IN B-1-E AND IN B-3-E, ONE FIRE PUMP LOCATED IN B-2-E, EACH RATED AT 300 GPM AT 100 PSI.

HEEL AND TRIM SYSTEM DESIGNED TO MOVE THE SHIP FORE AND AFT AND SIDE TO SIDE TO FREE THE SHIP FROM THE ICE IF REQUIRED. TRIM SYSTEM MOVES WATER FORE AND AFT AT A RATE OF 29,145 GALLONS IN 6 MINUTES OR AT 3,800 GALLONS PER MINUTE. THE HEEL SYSTEM MOVES WATER AT 13,600 GPM IN THREE LOCATIONS. PUMPS IN B-1-E, B-2-E AND B-3-E ARE CONTROLLED FROM B-2-E AND UTILIZE THE EMERGENCY GENERATOR FOR POWER. THE PUMPS MOVE 18,400 GALLONS OF WATER FROM SIDE TO SIDE IN 1.5 MINUTES. THE RESULTING MOTION HEELS THE SHIP WHICH LUBRICATES THE HULL EXTERIOR AND REDUCES FRICTION BETWEEN THE HULL AND THE ICE. THIS PERMITS BETTER PROGRESS THROUGH THE HEAVY ICE AND REDUCES INSTANCES OF BESETMENT, WHICH CAN OCCUR FREQUENTLY WHEN THE ICE HAS A LOT OF SNOW COVER.

HELICOPTERS 2 SIKORSKY HH52A

SMALL BOATS ARCTIC SURVEY BOAT (ASB) 39' SINGLE ENGINE DIESEL USED FOR SCIENTIFIC RESEARCH.
LANDING CRAFT (LCVP) 36' SINGLE ENGINE DIESEL USED FOR CARGO/PASSENGER TRANSFER.
MOTOR SURF BOAT (MSB) 25' 8" SINGLE ENGINE USED FOR RESCUE AND BOARDINGS.

OCEANOGRAPHIC WINCH 12,000 FT/ 3,600 METERS OF CABLE TO PERFORM DEEP SEA SCIENTIFIC WORK. CABLE USED TO TAKE SAMPLES OF WATER AND SEA LIFE AT GREAT DEPTHS.

ELECTRONICS 2 RAYTHEON SPS-64 RADARS WITH COLLISION AVOIDANCE INFORMATION. OMEGA, LORAN C, SATELLITE NAVIGATION EQUIPMENT. HIGH FREQUENCY RADIO COMMUNICATIONS WITH SATELLITE CAPABILITIES.

HULL CONSTRUCTED OF 1 5/8" HIGH TENSILE STEEL (100,000 PSI) OVER CLOSELY SPACED (12" TO 18") FRAMES FOR ICE BREAKING IMPACT. SHIP HAS 4 LOWER DECKS AND 3 UPPER DECKS. 2 ENGINE ROOMS, 1 GENERATOR ROOM, AND 2 MOTOR ROOMS FOR PROPULSION.