

MS-48



VESSEL CHARACTERISTICS

Length overall	15,2m
Beam width	3,65m
Draft (empty)	1,1m
Gross tonnage	15 tons
Cruising speed	11 - 14 knots under Beaufort scale sea state (2)
Working speed	Up to 3 knots
Rotates in radius	1.5 times of the vessel overall length
Propulsion engine	Cummins 6BT 5.9M
Fuel tank capacity	2 tanks total of 1200 liters
Fuel consumption	Consumption 87.7 liters/hour
Autonomy	Full rated speed 20hr (2500 rpm) 70% working mode (2000 rpm) 30% cruising mode (2500 rpm) Total capacity 70/30: 26 hrs With a reserve of 5% of fuel tanks
Vessel structure	Mild steel
Pilot cabin	Marine aluminum alloy
Shock protection	The vessel sides are equipped with rubber fenders

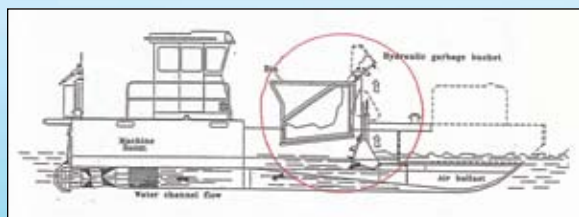


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FLOATING DEBRIS

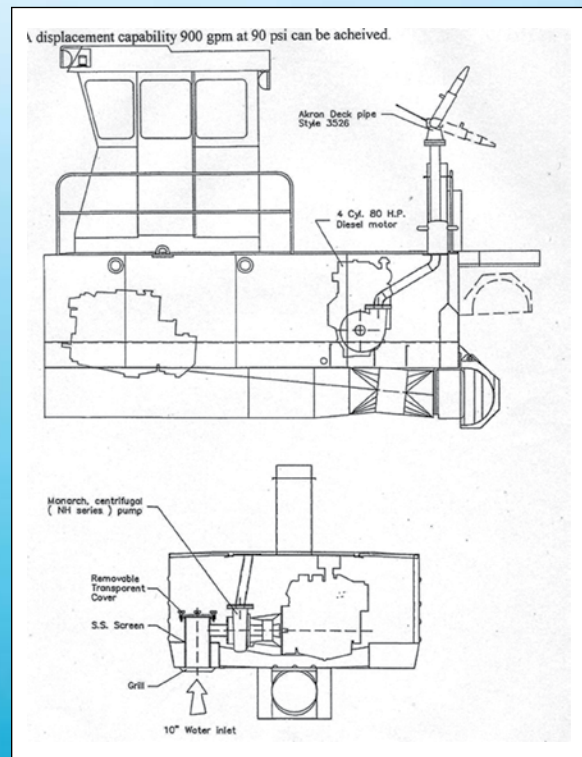
By making use of the suction current, the 2MS vessel draws in floating debris and bulky waste.

With the opening of a hydraulically activated central door the vessel creates a suction current using the turbine. The surface debris and bulky waste enters the bow and is collected in the bucket. With the bucket activated, a sequence valve activates the holding grate which halts debris while the bucket empties its contents in the containment bin. Once the sequence is finished the grate returns to its initial position.



WATER CANNON

The optional water cannon can be used to remove oil and debris from beaches and quays, which can then be picked up by the vessel. The water cannon can also be used for fire fighting and for spreading dispersing agents.



OXYGENATION

The 2MS vessels can be fitted with an aerator which injects air to a depth of 10 m (approx. 30 ft) and a width of 10 m (approx. 30 ft).

The long-term effects of this process are the re-oxygenation and revitalization of the water in which the vessel is operating.

The aerator is composed of vertical venturi nozzles which are positioned in front of the propeller creating a powerful injection of air into the water. Maximum hourly injection reaches up to 3400 m³/hr (over 100,000 ft³/hr) of air, enriching the water mass with oxygen.

This substantial oxygen enrichment contributes directly to the reduction of toxic chemicals suspended on the water surface.



Engine room



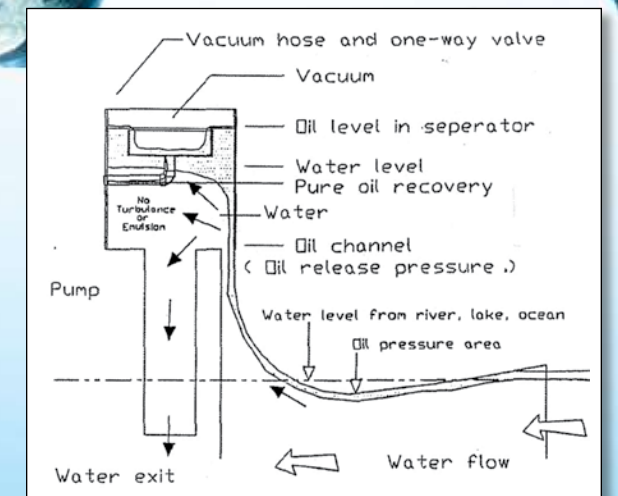
Recuperation oil tank

HYDROCARBON

With the vessel in recovery mode, suction current is created using the turbine.

The flow of water created draws with it various types of pollutants and surface debris. The solid pollutants are trapped in the retractable bucket while the liquid pollutants are drawn into the oil skimmer. A specially-designed control valve completes the separation cycle and all pollutants are discarded via a transfer pump.

Most areas of the world have a system of emergency response units that use booms, dispersants, and small skimmers to cleanup spills. This approach is not very effective. Each oil spill near land creates considerable damages to the environment.



Oil skimmer