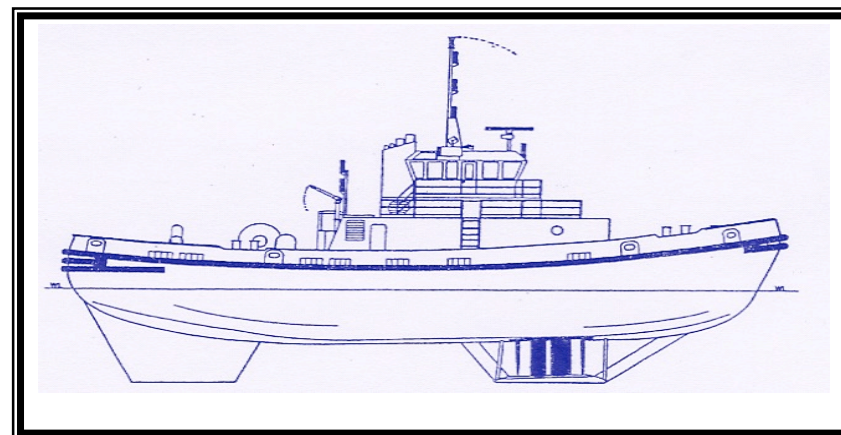


Panama Canal Authority – Tugboat Fleet – Principal Particulars



GUIA

GENERALS

Owner	: Panama Canal Authority
Owner/operator	: Panama Canal Authority
Category	: Harbor tug
Type	: Tractor
Year of built	: 1987
Shipyard	: Houma Fabrications, Inc., USA
Hull number	: 88
Class notation used for construction	: ABS
Flag	: Panamá
Port of registry	: Balboa, Panamá
Call sign	: HP-9785
Bollard pull	: About 31.0 tons
Speed	: 12 knots

DIMENSIONS

GROSS TONNAGE (GRT)	: 286.00 tons
Length overall (LOA)	: 28.95 m
Beam	: 10.36 m
Max. draught	: 5.18 m
Moulded depth	: 4.01 m

TANK CAPACITIES

Fuel	: 103.8 m ³
Fresh water	: 26.6 m ³
Foam	: 4.7 m ³

PROPULSION

Main engines	: 2 General Motors
Model	: EMD 645-E6
Main power	: 3,000 HP
Propulsion	: GII unit 28G Voith Schneider
Propulsion description	: Two cycloidal propulsion unit

FIRE FIGHTING EQUIPMENT

2-Stage Centrifugal Pump	: 5.68 m ³ /min. @ 10.55 Kg./cm ²
Firefighting monitors	: SKUM MK 100

TOWING EQUIPMENT

One (1) Double-Drum Hawser winch on the stern	
Marker	: Markey Machinery Company Inc.
Model	: DF-51
Drum capacity	: 195 m x 254 mm circumference line
Rate pull	: 907 Kg. @ 70 m/min.
Drum brake capacity	: 68 T
Bow Vertical Capstan	
Model	: Markey Machinery Company Inc.
Drum diameter	: CYP 90
Rate pull	: 68.58 cm.
	: 15.24 m/min. @ 5,443 Kg. pull
	: 33.53 m/min. @ 3,175 Kg. pull