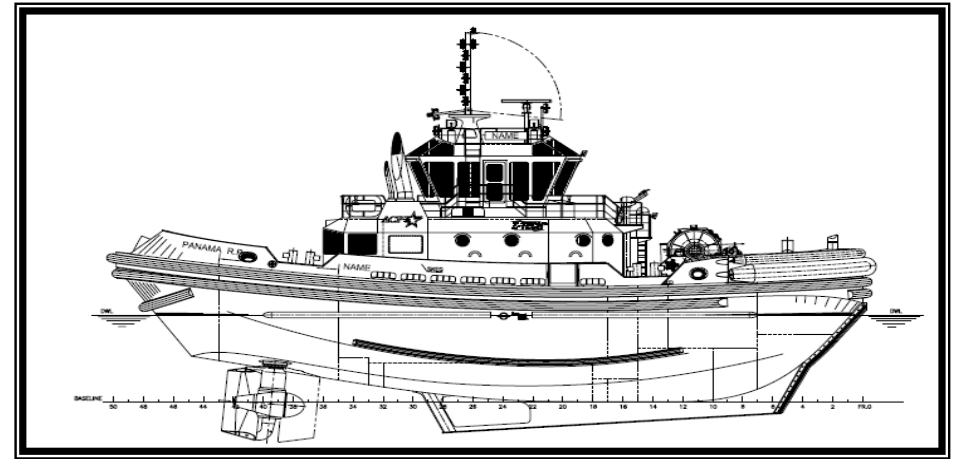


## Panama Canal Authority – Tugboat Fleet – Principal Particulars



### CHANGUINOLA

#### GENERAL

Registered Owner	: Panama Canal Authority
Owner/Operator	: Panama Canal Authority
Category	: Harbour Tug
Type	: Z-Tech
Built	: 2010
Yard	: Cheoy Lee Shipyards Ltd. Hin Lee Shipyards Ltd.
Hull No.	: 4988
Built to Class	: LR +100 AN Tug, + LMC UMS
Flag	: Panama
Port	: Balboa, Panama
Call Sign	: HP-6007
Bollard Pull	: About 65 tons
Speed	: 12 Knots
Displacement	: 649 tons

#### TONNAGE/DIMENSIONS

GRT	: 359 tons
LOA	: 90 ft
Beam	: 40 ft
Draught	: 18.24 ft
Moulded Depth	: 16.57 ft

#### TANK CAPACITIES

Fuel Oil	: 30,565 Gal
Fresh Water	: 3,170 Gal
Foam	: 1,849 Gal

#### MACHINERY

Main Engines	: 2 General Electric
Model	: GE 12V228
BHP	: 2X2180 Kw @ 1000rpm 5845 HP
Propulsion	: Schottel SRP 1515 FP 2600 mm Ø fixed pitch
Propulsion description	: Azimutal, Z-Drive rudder propeller

#### EMERGENCY INTERVENTION

One (1) Centrifugal Pump	: 5,000 GPM @ 152 PSI
One (1) Firefighting Monitor	: FFS 600

#### TOWING EQUIPMENT

Two (2) Hydraulic Towing Winches at the bow	
Manufacturer	: MacGregor - Plimsoll Pte. Ltd.
Model	: P446-HTV/SD-06/180-L
Drum capacity	: 607 ft x 7" circumference line
Rope Reeling Rating	: 6.0 tons pull @ 82 ft/min
Drum Brake Capacity	: 180 tons

One (1) Hydraulic Vertical Capstan at the stern	
Manufacturer	: MacGregor - Plimsoll Pte. Ltd.
Model	: PC-HVC-10/450
Warping Head Diameter	: 17.7 inch
Bollard Rating	: 10 tons @ 49 ft/min
Bollard Rating	: 10 tons @ 49 ft/min