



Rodson Universal

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Ref ga1208

## SELF PROPELLED POWER SHIP POWER ISLAND 3 UNITS

Built- 1986 Re-certified in 2007

The vessels are approx the same dimensions and specifications

Dimensions- approx- 705 to 765 Foot long

Approx 90 Foot in Beam

Draft- 32.8 Foot

Deadweight- approx ABT- 22,750 to 23,140 MTDW

All 3 - have- Sulzer- 7RND-76M- 16,800 BHP

SPD/Cons- 16.40 Knots// 56 MT MDO/Day

Bow Thrusters

Enhanced Personnel Accommodations

as fast transport of supplies and equipment

Specifications of the vessels as follows:

- RORO /// LOLO type with heliport pad -rear drop ramp

- Medical Facility and supplies

Small cranes-

2 X 30 t - 2 front/Bow

2 X 30 t - Mid Ship

2 X 30 t - Stern/// Rear

Container Capacity- 387 TEU

RORO Capacity- 126,585 Sq Feet

All generators are "Power Turbine" type with following:

- 1) Dry Low NOx
- 2) Dual Fuel rated- both Natural Gas/ Diesel #2
  - A) Special Applications- we do carry a full line-up of HFO#6 Units (Heavy Fuel Oil Number #6) for special client applications
- 3) Manufacturers- GE, ABB, Pratt & Whitney
  - A) Types: below- but not limited to types 1,2 and 3
    - 1) GE- " LM " series
    - 2) GE- Heavy Duty- "Frame MS5001 and MS 6001" series
    - 3) ABB- "GT" series
    - 4) Pratt & Whitney- " FT" series
    - 5) Solar- " T-60 and M-90/100"
- 4) All, units are set up in both as "Peaker Units" and as "Prime Power Units"
- 5) All units meet and exceed OEM specifications- per following
  - A) IIIE, UL, NEMA, CSA, SATO, SASO, etc
  - B) Per ISO 9001/ 9002 compliance
- 6) Full and complete latest control systems available for monitoring, regulating, load Sharing, etc
- 7) All, units can be remotely monitored by client via remote 232 Systems
- 8) Full starting, and stopping systems included
- 9) Full fire suppression systems are included
- 10) Typical Output at generator
  - A) 3 Phase
  - B) 50 or 60 Hz
  - C) 11,550 Volts at 50 Hz 13,800 Volts at 60 Hz
  - D) Speeds-"RPM" 3000 @ 50 Hz 3600 @ 60 Hz
  - E) P.F. ( Power Factor)- .85 to .90
  - F) Typical Heat Rates- (BTU/kHh)- 8,812 thru 11,840

Two (2) 40 to 100 MW Power Island/Islands

Can easily be increased from 40 to 100 MW Output "Plus"

Ship Mounted-- Complete Power Island mounted "Ship board"

Can be 3 Phase 50 Hz or 3 Phase 60 Hz

Dual Fuel capable-Natural Gas// Diesel #2-

(Ship/ Ships carry approx 1- 2 week supply of Diesel #2 for power generation



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Generators- all certified off as Factory New Surplus-warranted and certified as same as NEW OEM specifications

Type- "Power Turbines"

Power Island comes complete with full and complete switchyard and GSU transformer-for client grid connections

Based upon 4 X 10 MW Units- Mfg- GE, ABB and/or Pratt & Whitney

Turbines Type/ Model-TBN (To Be Noted)

## General:

The ships are always ready to generate power or need some time to re-set some systems before generation of power? Typically, 95 % of the time our power islands are configured

To be able to operate quickly without major modifications-All of our vessels contain

The own machine shops with a large variety of parts. Also, all of our switchgear

And GSU transformers are set up as dual rated 50/60 Hz and with multi-tap

Voltage ratings

The ships need any shore facility to generate power? (Fuel tank farm, transformers, HV facilities other than shore grit, campus for workers etc...)

Fuel- provided via client

If operating on natural gas-client to provide from dock side

If operating on D-2 (Diesel #2) our vessels carry approx 1 week supply- after that it is

## Mechanical:

Turbines

Varies per vessel- @ 40 MW- 4 X 10 MW each system simple cycle- 1 vessel-set up as a combined at 112 MW

manufacturers of turbines, manufacturing years and turbine types

GE (General Electric) P & W (Pratt & Whitney). Rolls Royce and ABB

Turbine type dependent upon configuration of which vessel I send vessels are dual fuel rated

heat rate for natural gas and diesel (Unit fuel consumption for 1 kWh power output)

10 MW Units- ISO Rated at 10.22 MW Output- Natural Gas

10,670 Btu/Wh 11,250 kj/kWh Pressure Ratio- 15.6:1

Exhaust Temperature- 903 degree (F) 484 degrees C

both natural gas and diesel fuels can be used for continuous operation-

filtering, pressure/temperature regulating and metering systems for natural gas on the ship

fuel treatment system for diesel and HFO -complete system structure with filters, screening, separators, heating, and PSI Boosting

turbines available for working with HFO

Vessel #1- at 40 MW – NO

Vessel #2- at 100 MW –NO

Vessel #3- at 120 MW plus- available after March 15, 2010-YES

## Electrical:

For the HV side;

Type of High Voltage side

Vacuum- Gas- Insulated- Full Utility Grade per UL, IEEE, CSA, SASO, SATO

High Voltage Level? Is it 132kV or 154kV for all three Power Ships?

Maximum- 161 Kv

step-up transformer 1 per every 40 MW. At 40 MW we use a base rated 60 MW GSU

Existing designed frequency - dual rated 50/60 Hz

Total Auxiliary Power consumption of the each ship's power plant

Slightly less than same units if the turbines were land based



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