

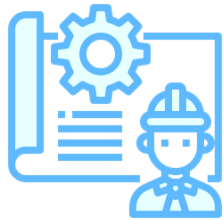


For sale: Pre-Owned LNG Hybrid Power Barge
7,5 MW_{el} electrical power & ~ 9,7 MW_{th} thermal power



1. Power Barge at a glance

The LNG Hybrid Power Barge has been operated at the harbor in order to supply cruise ships with electricity and heat with low CO2 emissions (instead of operating the Diesel Generators).



Type: Floating non-propelled Barge

Dimension: 76 x 11,4 x 2,5 m

Capacity: 11 kV / 60 Hz
10 kV / 50 Hz

Electrical Power: 7,5 MW_{el}
~ 9,7 MW_{th}

Historical Data: Project start 02/2012

Keel laying 01/2014

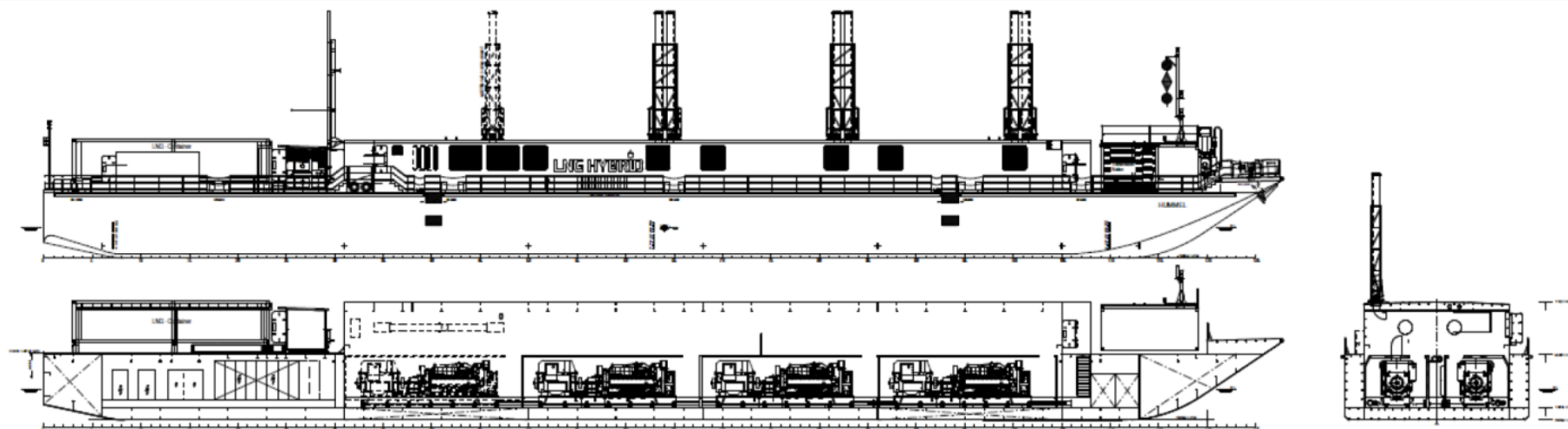
Launching 09/2014

1st Power Supply 05/2015



Fuel: LNG

2. Specification



MAIN DIMENSIONS:

| | |
|---------------------------------|---------|
| Length over all | 76.70 m |
| Breadth over all | 11.90 m |
| Breadth moulded | 11.40 m |
| Depth to main deck | 4.00 m |
| Draught, design | 1.00 m |
| Draught, scantling | 1.85 m |
| Air draught (on design draught) | 7.10 m |

CLASS:

Bureau Veritas
I * HULL * MACH
Barge
special service, gasfuel, no propulsion,
power supply, coastal area, aut-port,
clean ship, green passport, inwater survey

| | |
|-----------|----------|
| Class No. | 23964A |
| Hull No. | 1001-LNG |

TANK CAPACITIES:

| | |
|--------------------------|--------|
| Technical fresh water | 103 m³ |
| Ballast water | 373 m³ |
| Bilge | 48 m³ |
| Drain | 47 m³ |
| Lube and waste oil, each | 5 m³ |

CONTAINER STOWAGE ON DECK:

LNG 2 x 40' container, abt. 2 x 15 t LNG
alternatively 2 x 20' container

Equipment for gas processing unit, transmission station, control room and diesel generator set arranged in four (4) individual deck containers.

RESCUE EQUIPMENT:

- One (1) life raft, capacity of six (6) persons
- Seven (7) life buoys
- Six (6) safety working vests

GAS ENGINES:

| | |
|--------|--|
| Maker | Caterpillar |
| Type | G 3516 C |
| Rating | 1,622 kW (mech) / 1,500 rpm |
| Fuel | liquefied natural gas (LNG) or natural gas (NG) |

Installation of five (5) gen-sets. All systems, space and equipment capacities designed for two (2) additional gen-sets.

ELECTRIC POWER / CONSUMPTION:

1,556 kW_e @ 60 Hz, cos phi 1.0 / Cons. 4,322 kW
1,545 kW_e @ 60 Hz, cos phi 0.8 / Cons. 4,292 kW
(related to lower heating value of 10 kWh/Nm³)

All data for power and consumption are based on operation with fuel of methane number ≥ 80, DIN ISO 3046/1 and incl. two (2) engine-driven water pumps and one (1) engine-driven oil pump. Tolerance of fuel provided is ±5%.

GENERATORS:

| | |
|-----------------|---|
| Type | Leroy Somer LSA 53 VL80/4p |
| 50 Hz operation | 1,935 kVA / 1,500 rpm cos phi 0.8 / 10,000 V / 50 Hz |
| 60 Hz operation | 1,931 kVA / 1,800 rpm cos phi 0.8 / 11,000 V / 60 Hz |

Change of frequency by gear box integrated in generator sets.

DIESEL GENERATOR SET:

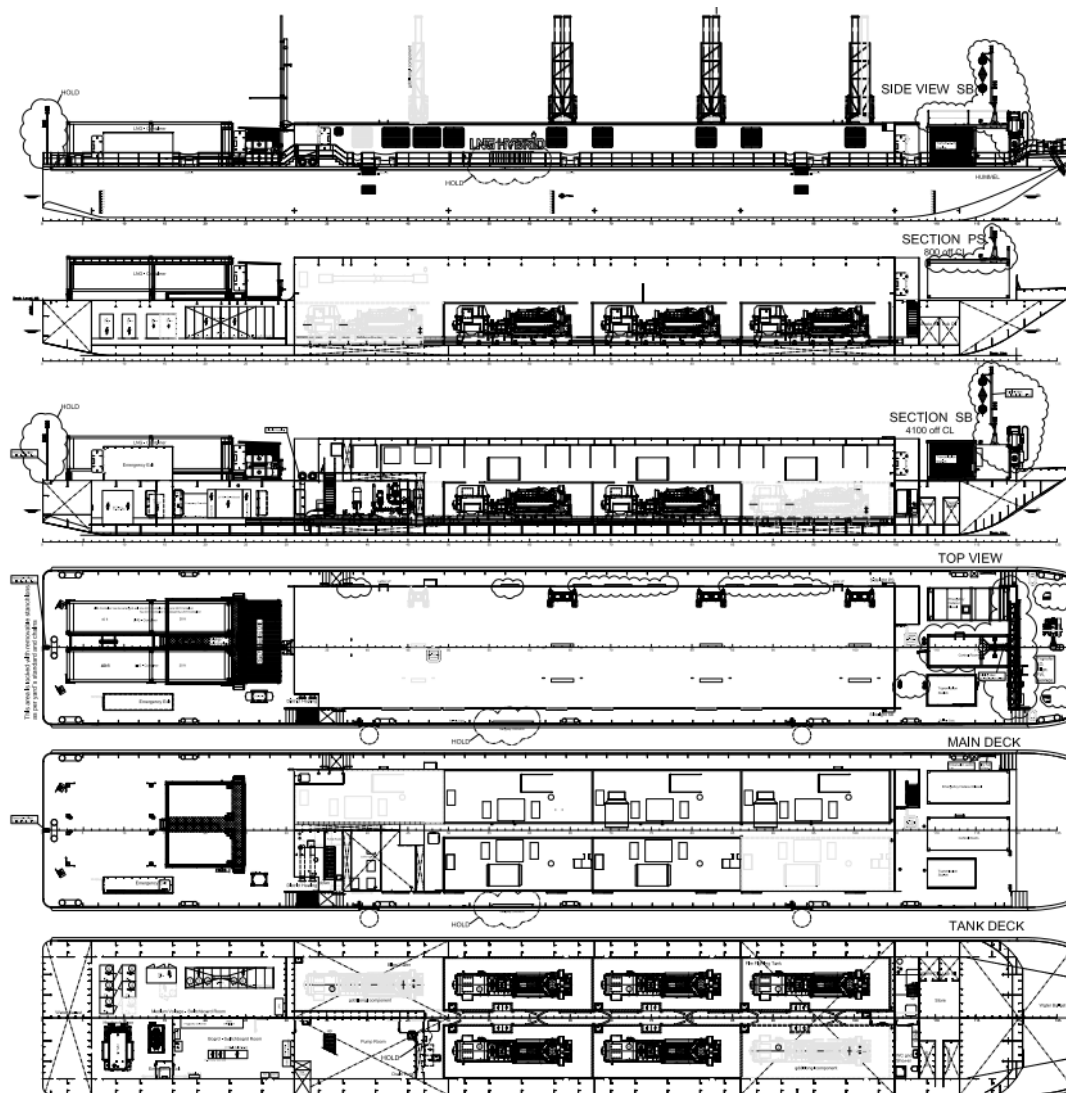
| | |
|---------|-----------------------------|
| Type | one (1) self-contained unit |
| Rating | 215 kW / 1,500 rpm |
| Fuel | MDO |
| Voltage | 400 V / 50 Hz |

OPERATION MODE:

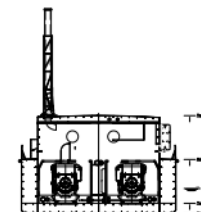
| | |
|---------------------|----------------------------|
| Service mode | e. g. cruise liner |
| El. power max | 5 x 1,545 kW / cos phi 0.8 |
| Voltage / Frequency | 11,000 V / 60 Hz |

EMISSION TREATMENT:

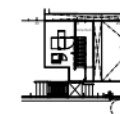
Each engine is equipped the a selective catalytic reactor to reduce NOx emissions to less then 40ppm



SECTION AT FRAME 65.5



SECTION 4600 a. CL



Remarks for Revision 07:

- New Folding Mast for Navigation Lights added
- Rolling modified
- SMT Bracket modified
- Top View updated
- Transfer Station added

LNG Hybrid Barge

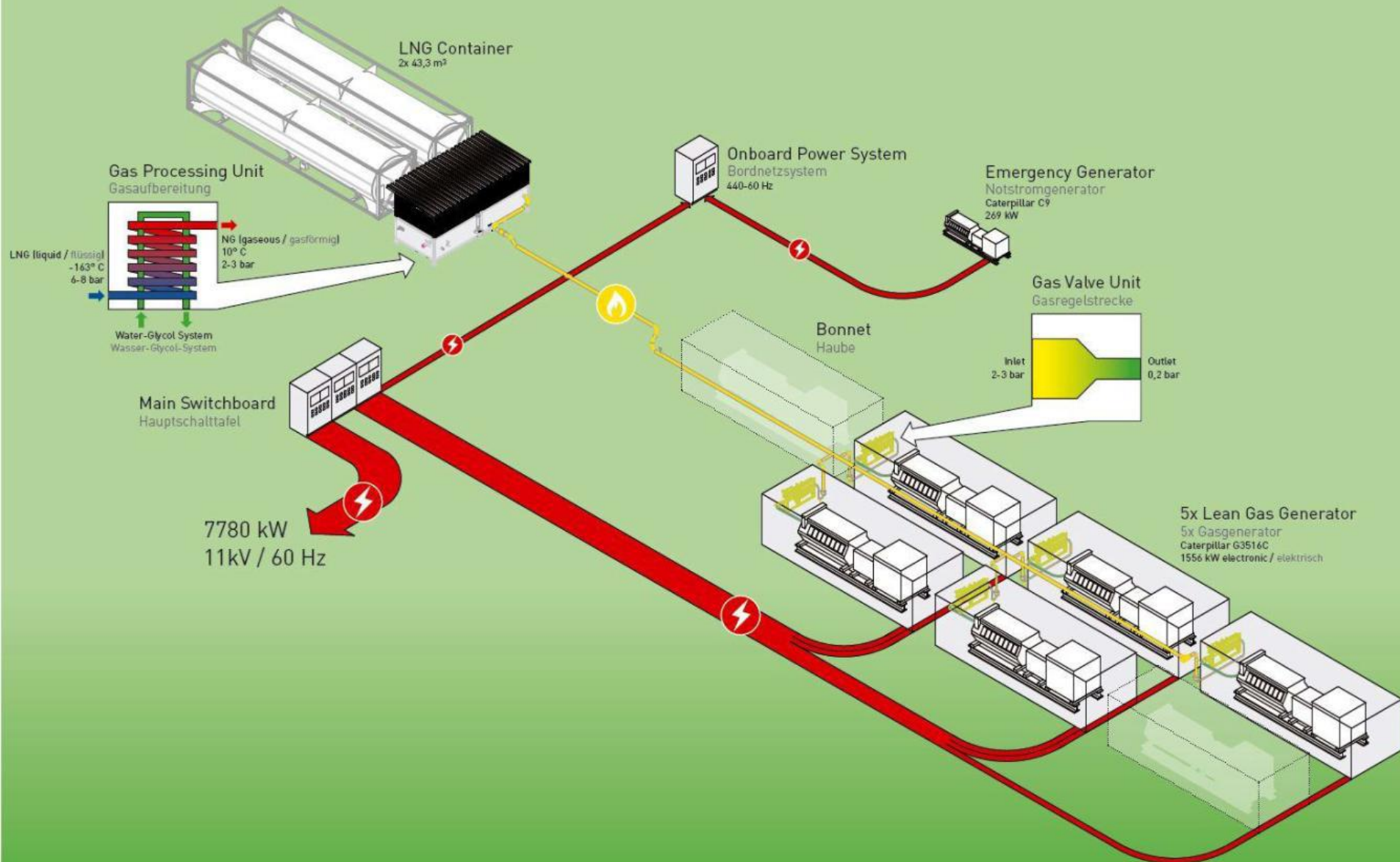
class: BV

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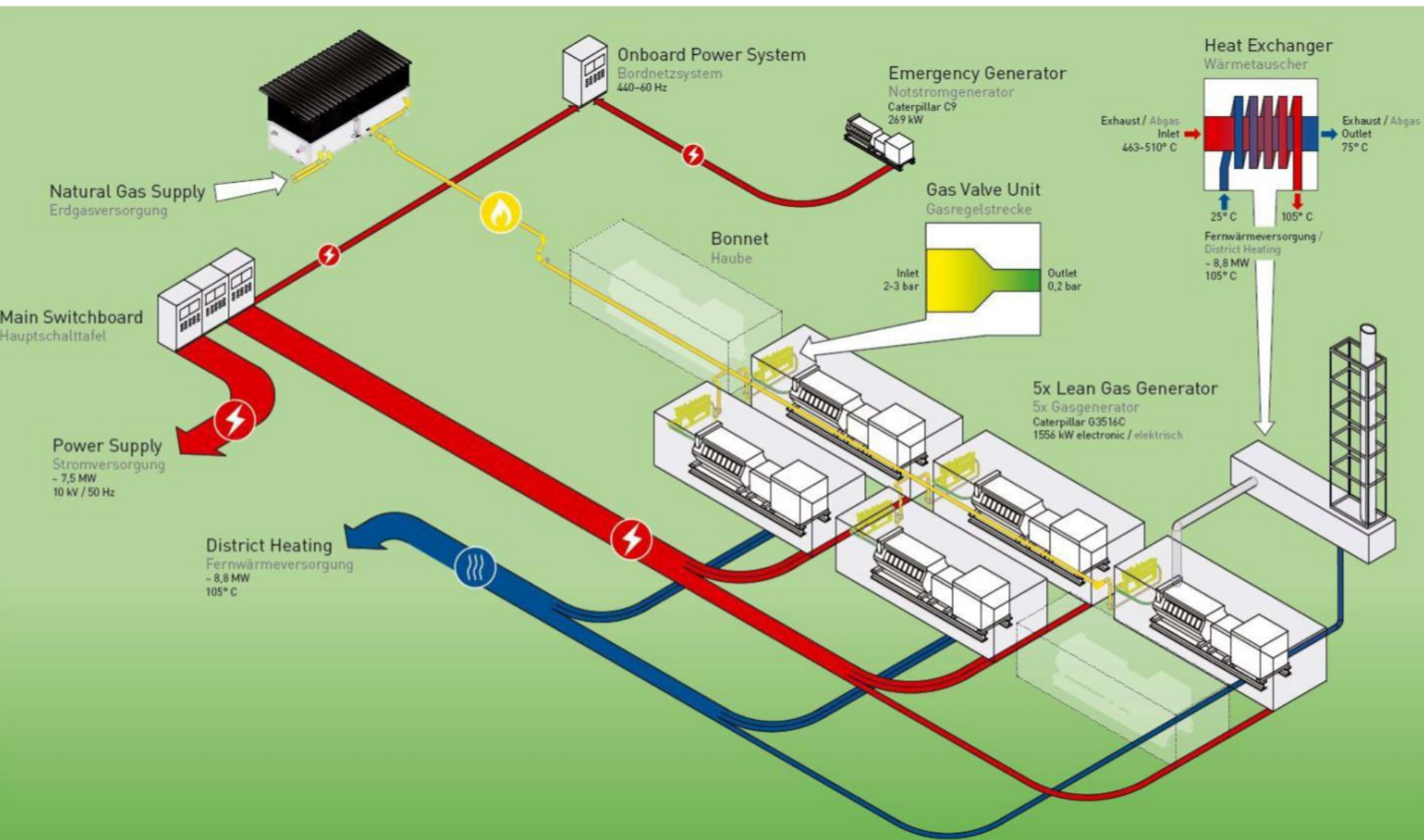
■ HULL ■ MACHINERY
Barge-Special service-power supply-gasfuel -no propulsion
Coastal area -out port-green passport-clean ship-4water survey

Length over all abt.: 76.7 m
Breadth over all abt.: 11.9 m
Breadth moulded: 11.4 m
Depth to Main Deck: 4.0 m
Draught: 1.85 m
Air Draught: 6.5 m (at design draught 1.0 m)

3. Summer operation option – Shore Power for cruise ships



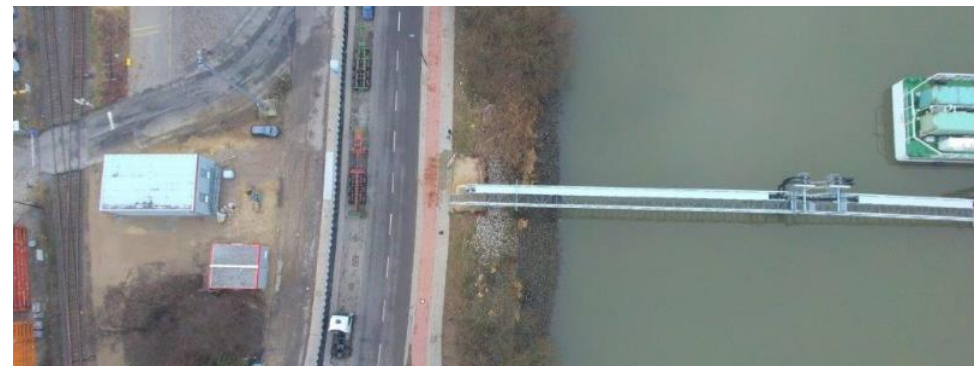
4. Winter operation option – CHP stationary operation



5. Floating LNG Power Station

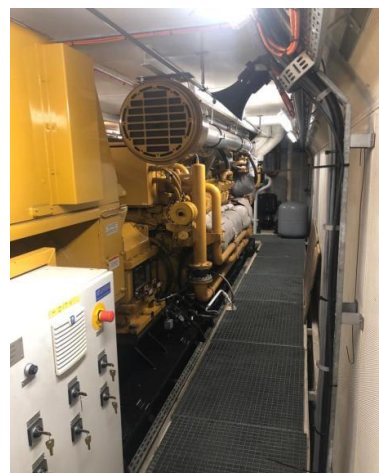
Example winter utilisation

- Floating Power Plant 7,5 Mwe
- Power Grid Connection 50Hz / 10kV



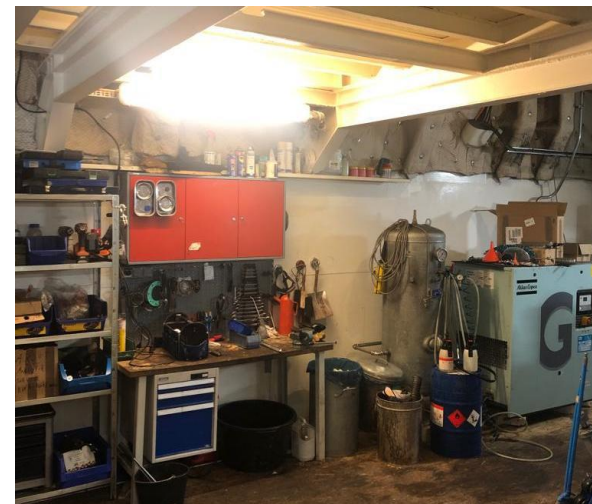


6.1 Inside



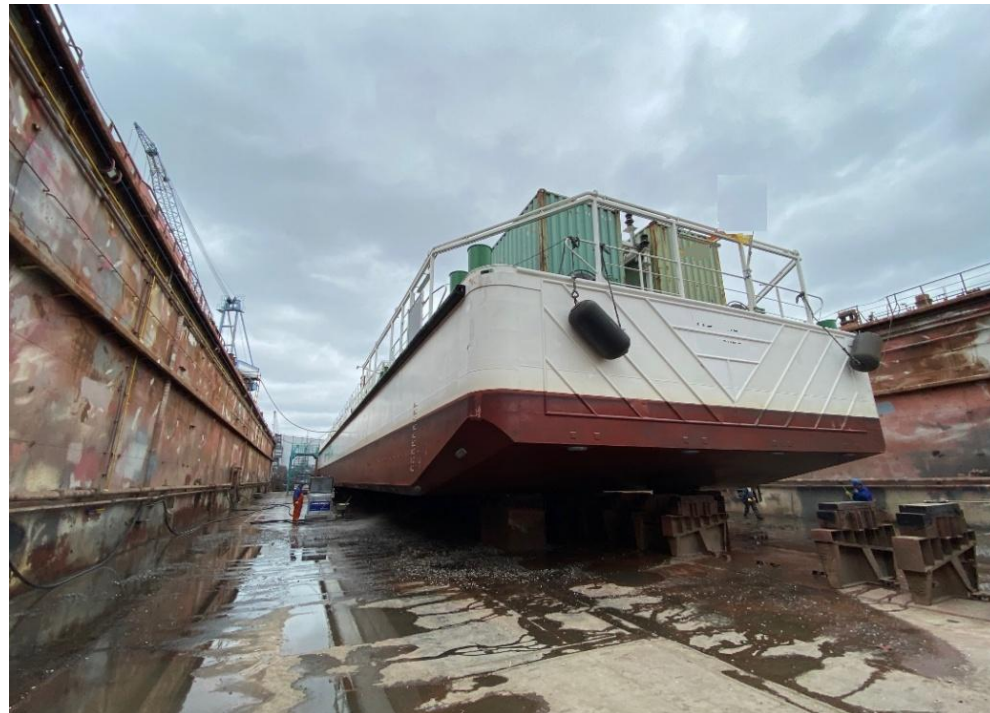


6.2 Inside





7.5 Years dry docking





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