

## NOVEL SOLUTIONS FOR THE TRANSPORT OF COMPRESSED NATURAL GAS



GASVESSEL project provides a novel system for compressed natural gas (CNG) transportation for multiple routes scenarios. CNG ships are the optimal solution for gas delivery on medium-short leg routes where offshore pipelines or LNG carriers are un-economic or impracticable. CNG Ships need not expensive liquefaction and re-gasification plants. The GASVESSEL ship is a risk based designed to carry natural gas (min. methane number 70) in the compressed gaseous form inside composite material high-capacity cylinders up to 335 bar installed inside inert holds. Transported cargo can be directly delivered to shore gas distribution net or gas storage. The GASVESSEL A-Ship shall be a CNG Ship suitable for year-round world-wide operativity (no ice).

### SHIP MAIN CHARACTERISTICS

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Ship Type                         | CNG carrier                       |
| Class and Class Notation          | A1 Compressed Natural Gas Carrier |
| Length Over All                   | 205.0 m                           |
| Length B.P.                       | 190.9 m                           |
| Breadth (mld)                     | 36.0 m                            |
| Depth (mld)                       | 22.0 m                            |
| Freeboard deck height             | 15.5 m                            |
| Design Draught / Summer Freeboard | 7.5 m                             |
| Speed                             | 16.5 knots                        |

### CAPACITIES

|                       |   |
|-----------------------|---|
| CNG cargo             | abt. 15 million Nm <sup>3</sup> at 20°C |
| Crew                  | 22                                      |
| Fuel (MDO)            | 300 m <sup>3</sup>                      |
| Fresh water           | 150 m <sup>3</sup>                      |
| Technical fresh water | 1250 m <sup>3</sup>                     |
| Sewage                | 3 m <sup>3</sup>                        |
| Endurance             | abt. 1 month                            |

### POWER GENERATION

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Generator set                        | 4x Wartsila 8V31DF               |
| Power                                | 4070 kW, each                    |
| Fuel                                 | Dual fuelled: Gas/MDO            |
| Gas consumption at 85% MCR (1 month) | abt. 1.6 million Nm <sup>3</sup> |

### COMPRESSION STATION

|               |                    |
|---------------|--------------------|
| Generator set | 4x Wartsila 8V31DF |
| Power         | 4070 kW, each      |

### LOADING AND UNLOADING FACILITIES – CARGO SAFETY

|                            |   |
|----------------------------|---|
| Loading/unloading area     | Midship, both sides                       |
| Emergency release system   | MIB quick connect / disconnect coupler    |
| Gas metering unit          | 2   |
| Gas quality control unit   | 2   |
| Gas cooling system         | 4x chillers, abt. 2.2 MW each             |
| Gas heating system         | 2x boiler, abt. 3 MW each                 |
| Dome deluge cooling system | Sea / fresh water, 3500 m <sup>3</sup> /h |