

2 x 10,000 m³ LPG/ Ethylene/ Ammonia/ VCM-Carriers“Norgas Shasta/ Norgas Napa” for Norwegian Gas Carrier (NGC), Norway

Project Data:

Shipyard:

HUDONG ZHONGHUA SHIPYARD,
People's Republic of China

Year of completion: 2003

Classification: DNV

TGE's scope:

EPCS-contract, gas handling
system & cargo tanks

Vessel:

10,000 m³ semi ref. LPG carrier, type 2PG
 Length o.a. 137.10 m
 Beam: 19.80 m
 Draught (LPG): 8.48 m
 Speed: 16.50 kn



Characteristics of gas plant:

Capacity:	10,000 m ³
Number of cargo tanks:	2
• Material:	5 % Ni Steel
Cargoes:	LPG/Ethylene/Ammonia/VCM
Design temperature / pressure:	-104°C/ 7.0 bar g acc. to IMO at sea
Maximum cargo density:	972 kg/m ³
Number of segregations:	2
Cargo manifolds:	2 liquid lines, 8", 6" ANSI 300 lbs flanges 2 vapour lines, 4", 6" ANSI 300 lbs flanges
Loading-/Unloading-rate:	1,020 m ³ /h
• Deepwell pump:	380 / 640 m ³ /h/at 120 m LC
• Booster pump:	380 m ³ /h at 120 m LC
Cargo heating / vaporising equipment:	
• 1 indirect ethylene vaporiser	1,000 m ³ /h at 15°C sea water temp.
• 1 indirect thermal oil heated LPG-heater / vaporiser	60 t/h propane – 42°C to 0°C, vapour 2 t/h
• 1 direct sea water heated LPG-heater / vaporiser	200 t/h propane – 42°C to 0°C at 15°C sea water, vapour 2t/h

Reliquefaction system:

Cascade / direct cycle
 2 x cargo compressors (BURCKHARDT)
 2 x refrigerant compressors (refrigerant R 404 A)

Cargo piping system:

Stainless steel,

Nitrogen generation plant:

• Capacity: Pressure swing adsorption
750 Nm³/h at 0.5 vol. % O₂