WHEN YOU NEED TO BE SURE SGS

SGS Nederland B.V. - Oil, Gas & Chemicals Services
SGS Botlek Location Bedrijvenpark Botlek
Welplaatweg 12 P.O. Box 7020-3000 HA Rotterdam

SGS REF. NR : 361231

Sample information			
Origin gas sample	Rolande LNG	CGR samplingpoint m/10*6(n)m³	-
Date analysis	27-12-2010	Prod./tested formation	-
Date sampling	24-12-2010	Prod. speed (m3/d)	-
Sampled at time	-	Bombe/cylinder nr.	08V0033
Date of arrival Sample	24-12-2010	Bookingcode	-
Sampling point	LNG	Name requester	-
Interval (m)	-	Division	-
Pressure at samplingpoint (Bar)	-	Date	-
Temp. samplingpoint (°C)	-	Report nr.	-
Samplingpressure before analysis (bar)	9	Fiscalpoint code	LNG

Calculations according to ISO6974		
Component	**Mol%**	
Methane	98.854	
Ethane	0.000	
Propane	0.000	
i-Butane	0.000	
n-Butane	0.000	
neo-Pentane	0.000	
i-Pentane	0.000	
n-Pentane	0.000	
Cyclopentane	0.000	
2,2-Dimethylbutane	0.000	
2,3-Dimethylbutane	0.000	
n-Hexane	0.000	
Benzene	0.000	
i-Heptanes	0.000	
n-Heptane	0.000	
Methylcyclohexane	0.000	
Toluene	0.000	
n-Octane	0.000	
Helium	0.000	
Hydrogen	0.000	
Oxygen	0.000	
Nitrogen	1.146	
Carbon dioxide	0.000	
Hydrogen Sulphide	0.000	
Total	100.000	

Real Gas, 273.15 K, 101.325kPa Heating values at 298.15 K			
Calculated properties according to (molar basis)		**ISO6976-95**	
Molmass	kg/kmol	16.180	
Density	kg/m3	0.7236	
Relative density	"-/-	0.5597	
GHV sup	kJ/kmol	880.421	
GHV sup	MJ/kg	54.413	
GHV sup	MJ/m3	39.373	
Compressibility	"-/-	0.998	
Wobbe-sup	MJ/m3	52.631	
O_2 (mol%) found in sample ?		**Yes! --->**	**1.283**
O_2 < 0,1 mol%		**No! --->**	**1.283**
H_2S On Site (ppm)		No	
H_2S GC (mol%)		No	
GHV sup kJ/kmol < 0,15 rel		Yes	

For an analysis according ISO-6974 the following shall apply:

Methylcyclopentane is lumped to the i-Heptanes;
Components separated between Benzene/Cyclohexane
and n-Heptane are lumped as i-Heptanes
i-Octanes are lumped to n-Octanes