



DYNAMIC ENGINEERING & AUTOMATION
Leader in Energy Technologies

BELTEXCO GLOVES 18 MMBTU@15 PSIG SNG (LPG AIR MIX) PROJECT BY DEA



Dynamic Engineering & Automation
Leader in Energy Technologies
Web: www.dea.com.pk



DYNAMIC ENGINEERING & AUTOMATION
Leader in Energy Technologies

***Installation, Commissioning and Startup of state of the art
Synthetic Natural Gas - SNG (LPG Air Mix) Plant at
Beltexco Gloves, Karachi***

PROJECT DETAILS

Date of Completion: September 06, 2013
OEM: Aether dbs, USA
Location: Karachi Export Processing Zone, Pakistan
Designed by: M/s Aether dbs, USA
Plant Capacity: 18 MMBTUH @ 15 PSIG



Equipments for SNG (LPG AIR MIX) Plant

The SNG Plant we have setup at BELTEXCO GLOVES consist of different modules. The major components include:

- LPG Gas Storage Tank
- LPG Transfer Pump
- SNG Blending System
- Venturi Based System And Control Panel
- Vaporizer
- Fire Fighting Equipments
- Gas Detection System

LPG Gas Storage Tank:

The reservoir shown has a capacity to store 5 Metric Tons of LPG. The shape of reservoir used is Hemi-spherical, it consist of Liquid suction, Liquid Return and Vapor line.

It is equipped with safeties including PRV (Pressure Relief Valve), Filling Valve, and Magnetic Gauge





DYNAMIC ENGINEERING & AUTOMATION

Leader in Energy Technologies

LPG Transfer Pump:

The Pump shown is of 3 HP explosion proof motor, and it's of 1475 RPM, it's a three phase pump (400 Volts). It is compatible for fulfilling the requirement of system.



SNG Blending System (Vaporizer & Control Panel):



The SNG system shown is of 18 MMBTU capacity designed by Aether dbs, USA. It has one Venturi which is shown below; one tank in which mixture of water and glycol is filled and other parts of vaporizer is shown below.





Venturi Based SNG System:

Capacity = 18 MMBTU/HOUR

Pressure = 15 PSIG



Control Panel



The shown picture is of the control panel that is used to turn ON the LPG transfer pump and as well as the indication came of any fault it can be reset by this panel.

Vaporizer:

These are the internal parts of system, vaporizer control panel, cut off switches, Honeywell Valve, Ignition Transformer, Temperature gauge etc.





“Fire Fighting Equipments”

Fire Monitor:

**Supply of Fire Water Monitor with Jet Nozzle Water Flow:
2500 lit/min. Construction: 2.5” Carbon Steel Schedule – 40
Water Inlet: 3” Ø, # 150 flange, Option of Foam Inductor.**



Fire Monitor and Hose Reel with Foam:

Fire Monitor test with Foam inductor Max. Feeding Pressure of 10 bar



Bowzer water sprinkler shed

**This is the Bowzer shed of Beltexco Gloves used when
Bowzer temperature increased**





Gas Detection System



This is the control room of GT-System. There are four gas detectors which are placed in different places and their output hooters are connected.

Implementation and Testing:

All the equipments were implemented as per the maps and directions keeping in mind the entire international standards. The equipments were then connected through the pipes and valves were placed accordingly. The lines were then checked through the Hydro testing as for any leakages throughout the system. After successfully checking for any leakages and fixing those we found the system was ready to go through the testing phase.



Flare is shown in the picture when plant commissioning is done and test the gas vent from discharge line