DYNAMIC ENGINEERING & AUTOMATION
Leader in Energy Technologies

SHABBIR TILES & CERAMICS LIMITED
90 MMBTU/H@15 PSIG
SNG (LPG AIR MIX) PROJECT BY DEA

Dynamic Engineering & Automation

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23/09/2013

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Installation, Commissioning and Startup of state of the art Synthetic Natural Gas - SNG (LPG Air Mix) Plant at Shabbir Tiles & Ceramics limited Unit#1, Karachi

PROJECT DETAILS

Date of Completion:	**September 23, 2013**
OEM:	**Aether dbs, USA**
Location:	**15th Milestone, National Highway, Landhi Karachi, Pakistan**
Designed by:	**M/s Aether dbs, USA**
Plant Capacity:	**90 MMBTU/H @ 15 PSIG**

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Equipments for SNG (LPG AIR MIX) Plant

The SNG Plant we have setup at Shabbir Tiles 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.

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LPG Transfer Pump:

The Pump shown is of 10HP explosion proof motor, and 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 90 MMBTU/H @ 15 PSIG capacity designed by Aether dbs, USA. It has five Ventures which are shown below; two tanks in which mixture of water and glycol is filled and other parts of vaporizer are shown below.

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Venturi Based SNG System:

Capacity = 90 MMBTU/HOUR

Pressure = 15 PSIG

NO Of Ventures = 5

OEM: Aether dbs, USA

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.

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"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.
Fire Monitor test with water pressure Max. Feeding Pressure of 10bar

Fire Main Pump, Automatic Jockey Pump System and Decanting Pump:

Capacity: 500GPM

Pressure: 8 Bar

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Gas Detection Sysytem:

This is the control Panel of GD-System.There are four gas detector which placed in different places.

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 commisioning is done and test the gas vant from discharge line