



Gas Processing Equipment Pvt. Ltd.



GAS CONDITIONING SYSTEMS

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Web Site – www.gpel.in

Gas Processing Solutions



Gas Cleaning and Conditioning Skids & Systems

What we normally term as Gas Conditioning Skid does two jobs – mainly cleaning and conditioning:-

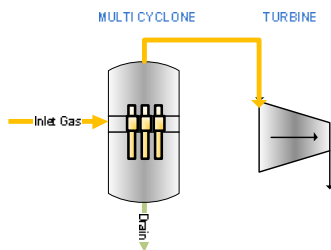
- Cleaning covers particulate , slug removal and condensate removal (if can not be avoided)
- Conditioning covers pressure increase / reduction , providing superheat , dew point depression.
- Then the skids are also equipped with flow measurement apparatus. Some times odorization is also added.

This means a complete gas stream simulation is a must with the knowledge of phase envelope , condensation of each component and the hydrate formation temperature.

We build them also for all the high calorific value gases including coke oven gas and the approaches are different. The next paragraphs will mostly handle the concepts used for natural gas.

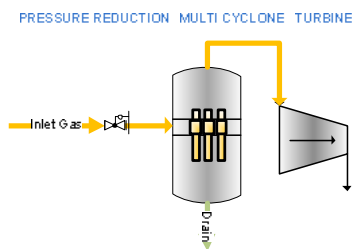
Skid Concept

☐ Dry Gas – Simple particulate filter



Here the gas is dry and non condensing. Pressure is same as turbine inlet .Turndown is limited and a particulate filter or filter separator is recommended before the turbine.

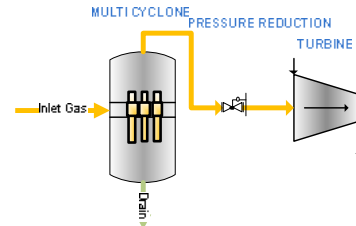
☐ Dry Gas with Higher Pressure, Low Dew Point



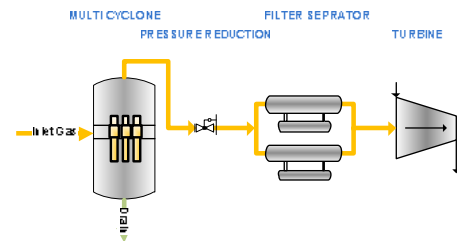
Here the gas is at a higher pressure.

Turndown is limited and a particulate filter or a filter separator is recommended.

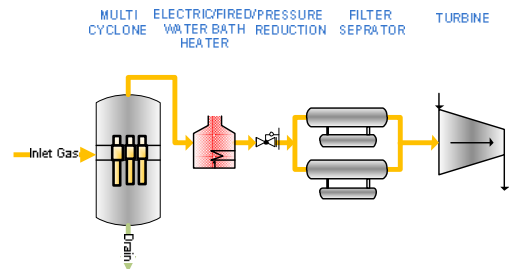
☐ Dry Gas with Higher Pressure , Very Low Dew Point



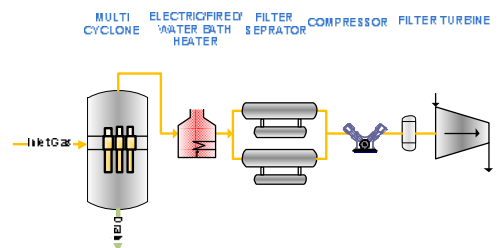
Gas dew point is lower than gas temp. even after pressure reduction. Turndown is limited and a particulate filter or filter separator is recommended before the turbine.



☐ Condensing Gas , Higher Pressure



☐ Condensing Gas , Lower Pressure than Turbine Inlet.



The above schemes are mostly for gas turbine inlet with superheat. For application where superheat is not acceptable we use Dew Point Depression System.





As per the industry, the skids explained above can also be termed as Fuel Gas Conditioning Skid.

Gas Conditioning also embraces various other applications where the conditioned gas is even more critical as the same goes into the process.

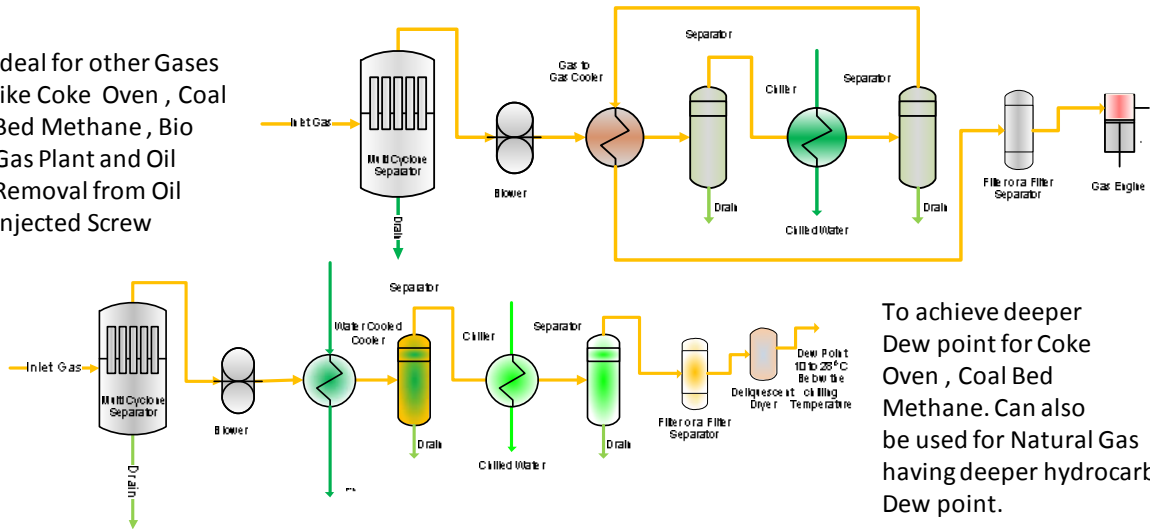
We design and built the fuel gas skids along with the other gas conditioning skids backed up by our licensed simulation software and in depth knowledge of gas flow, thermodynamics and gas movers helps us to design the right Package for your application.

The details of other possibilities are narrated below:-



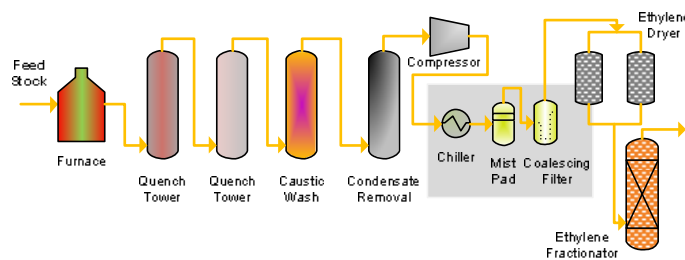
Gas Conditioning with Water Dew Point Depression and Dust Removal

Ideal for other Gases like Coke Oven, Coal Bed Methane, Bio Gas Plant and Oil Removal from Oil Injected Screw



To achieve deeper Dew point for Coke Oven, Coal Bed Methane. Can also be used for Natural Gas having deeper hydrocarbon Dew point.

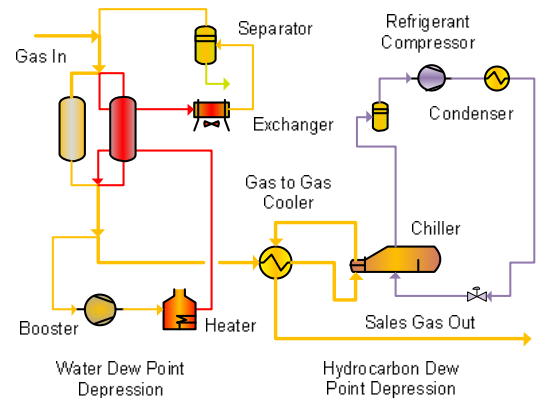
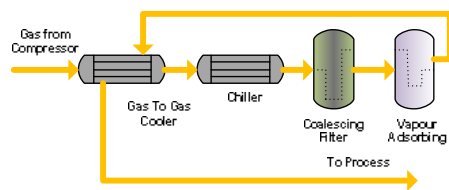
Cracked Gas Conditioning for Removal of Green Oil before Dehydration.



We have handled from 12,000 nm³/hr. at 0.05 bar pressure to 245,000 at 80 bar g pressure in gas cleaning and conditioning application.

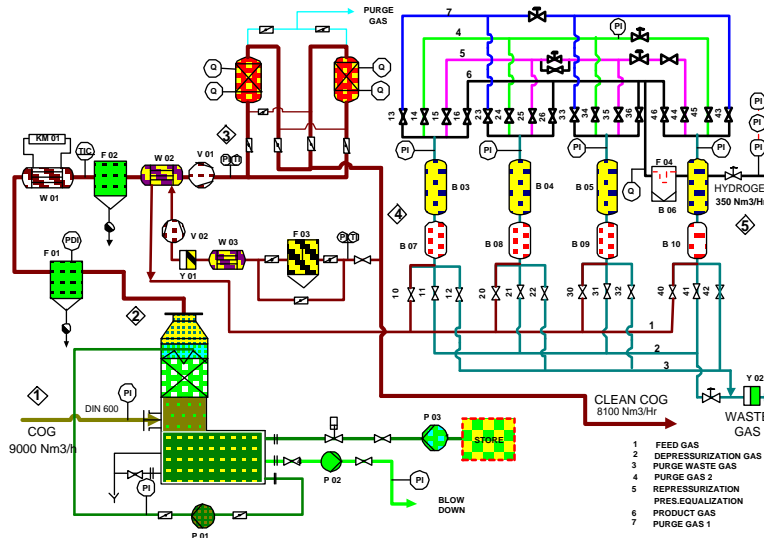
Gas Conditioning with Water and HC Dew Point Depression

Oil Injected Screw Compressor Oil Removal System down to 0.004 ppm depending on the type of Oil.



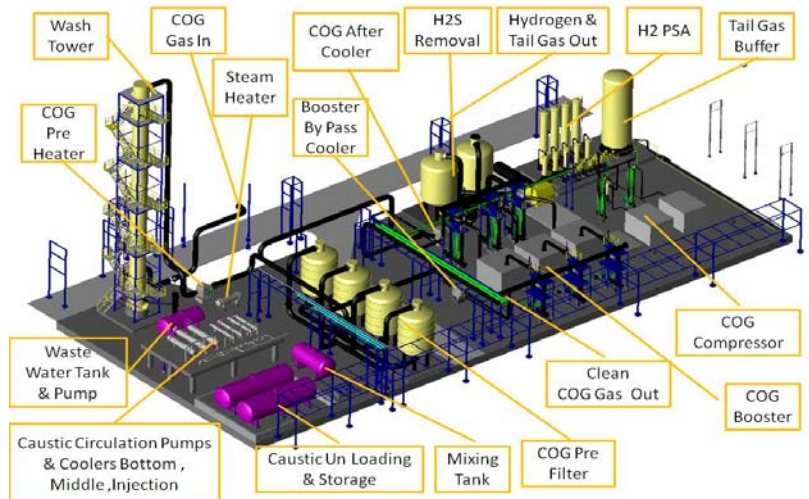


❑ Large Gas Conditioning with Dew Point Depression and Gas Purification & Separation for Furnace / Burner Application and Hydrogen PSA.



Typical PFD of the above plant

3D with Equipment Placement – we build the entire plant



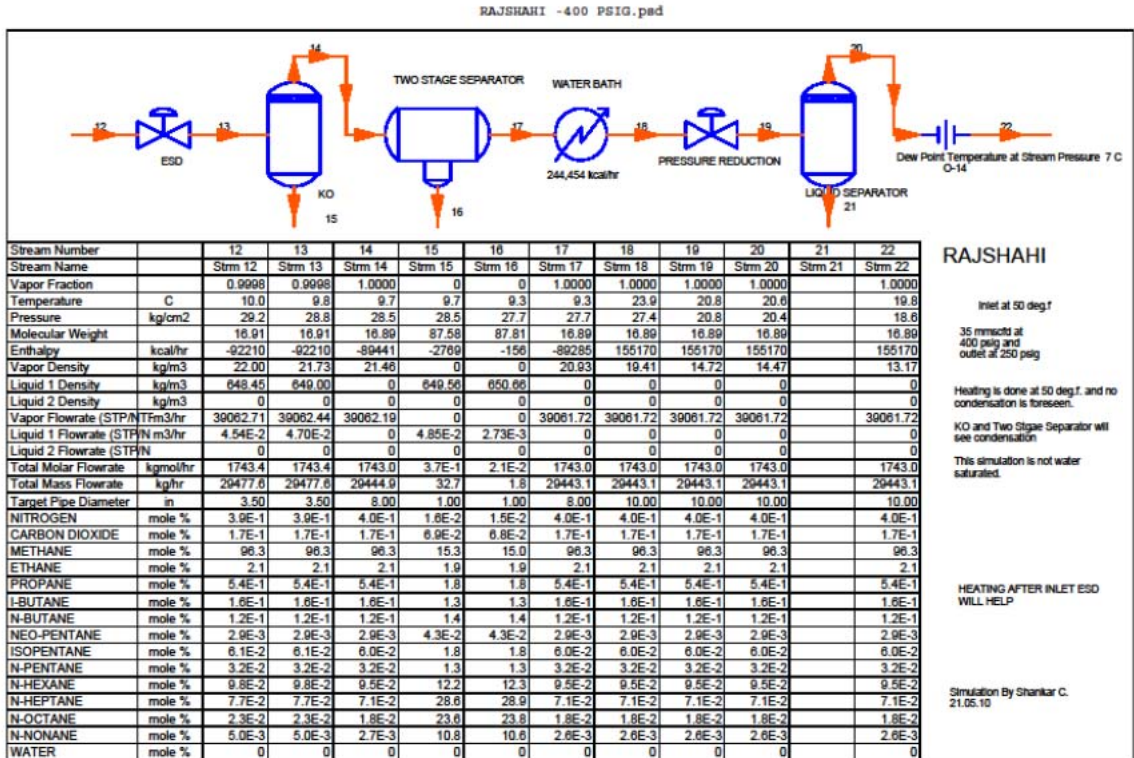
Our other complimentary product to complete the package:-

- Gas Dehydration
- Gas Screw Compressor Packages
- Gas Compression up to 400 Bar G
- H₂S Removal
- Methane Enrichment
- Hydrogen Enrichment
- Oil Removal

You may contact us at mktg@gpel.in



Simulation of Gas Conditioning – Gas Turbine – Natural Gas



Simulation of Gas Conditioning – Burner for Steel Making – Coke Oven Gas

