Refinery Gas Analyser - Quick Reference Guide

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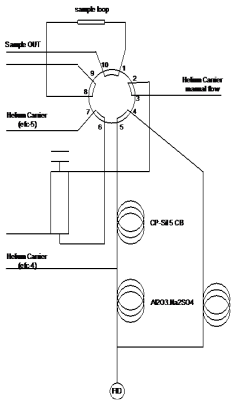
Refinery Gas Analyser

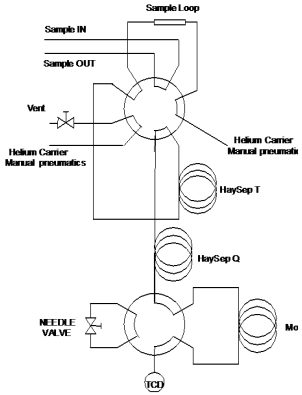
The Refinery Gases Analyser, (RGA), is a standard turnkey solution to refinery gas analysis. The analyser is suited for all types of refinery gases, including stack, flame and reformer gases. The analyser has evolved from a standard RGA to a rapid RGA. The GC Analyser has 3 channels with a multi-valve design using both capillary and packed/Micropacked columns. The system is divided into 3 channels, Light Hydrocarbons, (LHA), Permanent Gases, (PGA), Hydrogen, (H2A). This multi-channel/multi injection approach to complicated samples is a common theme with dedicated analyser design. The 3 sample loops shown in the diagram below are all linked together, so the same sample flows through each of the loops. When the loops are switched into the injection position, the same sample is placed on each channel. The RGA has a number of forms, for example a full analysis or a rapid analysis also an RGA can be built on a number of different GC chassis.

The Rapid RGA can be equipped with optional Liquid Injection Valve on the light hydrocarbon channel. For liquefied gases such as LPG or high pressure samples the optional Micro-Gasifier can be used in front of the Rapid RGA sample injection valves. The Micro-Gasifier evaporates liquefied gases and reduces high pressure gases into low pressure gases preventing any sample discrimination.

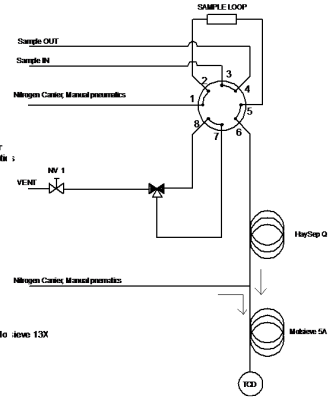
Light Hydrocarbon Channel



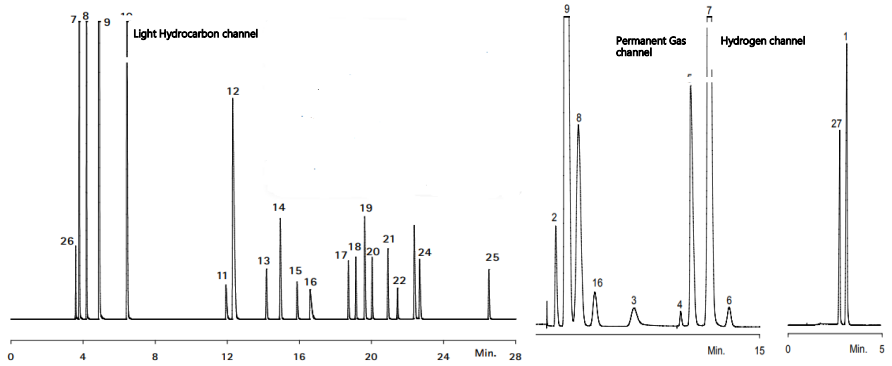
Permanent Gas Channel



Hydrogen Channel



Refinery Gas Sample



1. Hydrogen
2. Carbon dioxide
3. Hydrogen sulphide
4. Oxygen
5. Nitrogen
6, Carbon monoxide
7. Methane
8. Ethane
10. Propane
11. Cyclo Propane
12. Propylene
13. i-Butane
14. n-Butane
15. Propadiene
16. Acetylene
17. t-2-Butene
19. i-Butene
20. C-2-Butene
21. i-Pentane
22. n-Pentane
23. 1,3-Butadiene
24. Propyne
25. Butyne
26. C6+

Conclusions

Refinery Gas Analyser:

- The analysis is completely automated.
- No costly method development.
- A full range detection is possible.
- All channel results are combined into 1 report.
- The simple set-up is aimed easy operation/maintenance and service.

ChromSolutions Ltd

Over 110 years of expertise in analytical instrumentation. Independent advice for analyser selection. Clear recommendations and comprehensive training. ChromSolutions offers reliable guidance and support for your analyser purchase, installation and operational journey.

For more information on Analysers please contact us:

Chrom Solutions
92 Hobletts Road
Hemel Hempstead, HP2 5LP, UK

Email: info@chromsolutions.co.uk
Website: http://www.chromsolutions.co.uk
WhatsApp: Chat - ChromSolutions