High Pressure RGA

Process monitoring with the Hiden HMT dual mode high pressure RGA

Comparison of HMT vs standard residual gas analysers – example data

Monitoring vacuum processes with a conventional RGA at pressures >10^{-4} Torr typically requires the addition of differential pumping. Alternative analyser types optimised for high pressure operation have degraded sensitivity at low pressures.

The innovative Hiden HMT analyser enables operation at high pressure yet maintains full RGA performance at high vacuum with dual mode operation:

- UHV mode for high performance residual gas analysis at pressure <10^{-4} Torr through to 10^{-13} Torr
- high pressure mode for measurement at pressures >10^{-4} Torr through to 5X10^{-3} Torr

The perfomance of the HMT system operating in high pressure mode compared to regular RGA performance is illustrated in the graphs below where Argon fill gas flow is increased progressively:

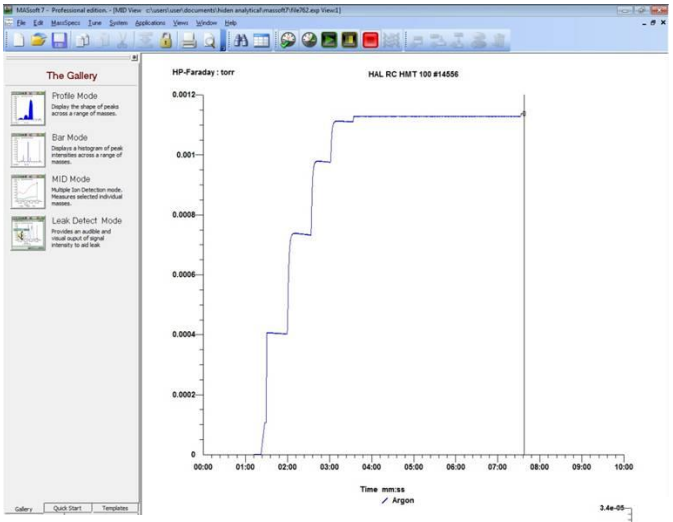
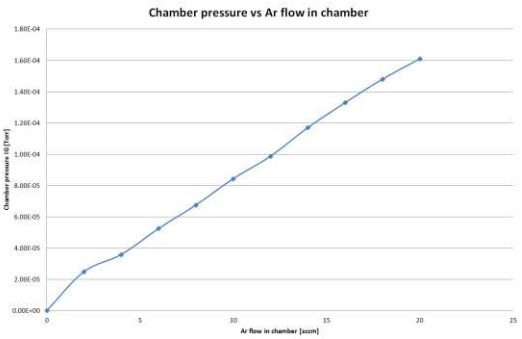


Fig 1: HMT analyser – measuring Argon in the chamber up

Fig 2: Chamber pressure



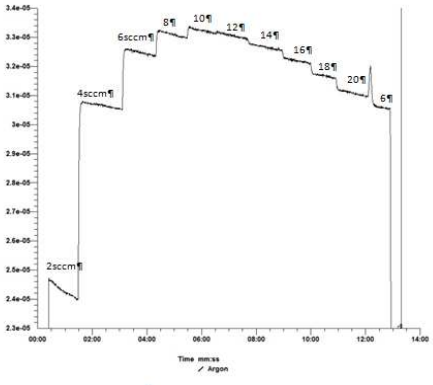


Fig 3: The same experiment monitored by a regular RGA. Non linearity occurs for measurements at pressure > 3X10^{-5} Torr