

Safety notes for high purity gas equipment

MATERIAL CHOICE

Stainless Steel is used in processes with toxic or corrosive gases. Furthermore it is recommended to use stainless steel materials for process operating with high purity gases and for calibration gases with corrosive ingredients in the range of ppm or ppb or more. For non corrosive gas qualities up to 5.0 it is sufficient to use copper pipelines or brass materials. For the gas supply for ECD (electron capture detector) applications stainless steel or a special cleaning process is recommended.

IMPLEMENTING OF CORROSIVE GASES

When applying corrosive gases, the entrance of moisture and atmospheric oxygen should be avoided. The prevention of moisture to the extent of less than 5 ppm demands that the choice of material, purge gas, as well as the purging method should be thoroughly examined.

The pressure gas cylinders are placed in a safety gate with defined air load change.

RELIEF VALVE FOR PRESSURE REGULATOR

Pressure regulators, used as cylinder or panel regulators, usually have an integrated relief valve with a relief pressure adjusted to the max. outlet pressure. The primary purpose of the relief valve is to protect the pressure regulator. For the protection of especially sensitive processes behind the regulator, a relief valve is necessary.