

## **Plasma cleaned pressure switches and transmitters**

**SUCO now offers plasma-cleaned pressure switches and transmitters in the purity levels "oil and grease-free" e.g. for oxygen applications and "PWIS-free" for coating processes.**

Liquid or gaseous oxygen (O<sub>2</sub>) in compressed form is an essential component of many medical applications, such as respiratory or anesthesia equipment. In autogenous welding or cutting, an oxygen-gas mixture is ignited in a controlled manner to process large work pieces. Strict safety regulations apply when handling oxygen. The colorless and odorless gas itself is not flammable, but accelerates the combustion process of organic substances considerably. Even a small spark is enough to cause lubricants or greases to ignite spontaneously or explode.

### *High safety requirements*

The demand for components free of oil and grease has increased rapidly in recent years. This is due to international standards such as ASTM G93:2019 of the American Society for Testing and Materials as well as national regulations (NFPA 51, CGA G-4.1, VDMA 24364) and regulations of the professional associations in the respective country of use.

As a manufacturer of high quality components for pressure monitoring, SUCO recommends to use only pressure switches and transmitters with the addition "oil and grease free" when handling oxygen and other highly flammable media. With this procedure, the products are plasma-cleaned in a hermetically sealed process chamber after functional end-of-line testing.

The eco-friendly cleaning process is based on the ionization of oxygen molecules under vacuum and subsequent transfer into the highly reactive plasma state. Organic substances based on hydrocarbons are removed without residue up to a maximum purity level of 20 mg/m<sup>2</sup>. This corresponds to Level B according to ASTM G93:2019. After plasma cleaning, the pressure switches and transmitters are individually packed in specially marked PE bags to protect them from further contamination.

### *Compliance with PWIS*

The acronym "PWIS" refers to paint-wetting impairment substances, such as lubricants, oils, greases or silicones, which, even in small quantities, can cause partial coating defects - so-called craters - as well as large-area wetting and binding disorders of the entire paint film. In addition to rising costs due to rejects and manual repairs, the adhesion, durability and ultimately the quality of the coating suffer most from the contamination. The demands on OEMs and their suppliers with regard to PWIS-free individual parts are therefore very high.

By extending the plasma cleaning process and using silicon-free gloves and PE bags, SUCO pressure switches and transmitters meet PWIS conformity according to the standard sheet VDMA 24364.

The high product purity and efficiency of the plasma cleaning process is regularly verified by the German accreditation body. On request SUCO provides a manufacturer's declaration for the respective cleaning process. SUCO's plasma cleaned products meet all current standards with regard to media compatibility and product purity in order to ensure the maximum operational safety of your applications and systems.

We are happy to advise you on your request and your application. Please do not hesitate to send us an inquiry.