Oxygen generation based on vacuum pressure swing adsorption – OXYSWING

Mahler AGS oxygen generation plants are based on vacuum pressure swing adsorption technology for capacities from about 300 to 5,000 Nm³/h and purities up to 94 vol.-%.

OXYSWING VP5A units are designed for the oxygen generation from ambient air. Depending on customers’ focus and demands the VP5A systems are designed invest or energy optimized. Purities of up to 94 vol.-% oxygen product quality can be achieved. Product gas pressures > 1.2 bar(abs) will be achieved by means of subsequent oxygen compression. The vacuum pressure swing adsorption (VP5A) technology employs the basic principle of air separation at ambient temperatures by using zeolite (a material that adsorbs nitrogen to leave a rich stream of oxygen). Individual plant concepts with respect to local situation (building available, etc.), admissible sound emission, integration in the production process can be offered.

Plant features of the OXYSWING oxygen generation plant

- Low cost on-site production
- Fast start-up, fully automatic and unattended operation
- Product flexibility regarding flow and purity
- Automatic part load
- Remote control
- Completely pre-manufactured skids
- High availability and reliability
- Design for long lifetime

Plant data

Feedstock: ambient air
Product gas capacity: 300 to 5,000 Nm³/h
Purity: up to 94 vol.-%
Pressure*: about 1.2 bar(abs)

* at exit oxygen VP5A unit; higher pressures on demand.

Typical applications for oxygen plants

- Metallurgical and steel industry
- Glass and enamel industry
- Pulp and paper
- Cement industry
- Water treatment
- Waste incineration

Additional/Optional features for oxygen generation plants

Our plants are used worldwide. Especially for Russia, Belarus and Kazakhstan we are able to provide our OXYSWING plants with all necessary TR certificates and declarations for the import and operation in the Custom Union, in particular with a declaration according TR CU 010/2011 (MD), TR CU 004/2011 (LV/D) and TR CU 020/2011 (EMC) for the entire oxygen plant. Certificates or declarations according TR CU 032/2013 for all pressure vessels are also part of our scope of supply.