



## **OXYGEN** Application

### **O<sub>2</sub> APPLICATION**

Oxygen (O<sub>2</sub>) is an active, life-sustaining component of the atmosphere: making up 20.94%. It is colorless, odorless and tasteless. Oxygen is commonly used, with or instead of air, to increase the amount of oxygen available for combustion or biological activity. This increases reaction rates and leads to greater throughput in existing equipment and smaller sizes for new equipment.

Oxygen has numerous uses in steelmaking and other metals refining and fabrication processes, in chemicals, pharmaceuticals, petroleum processing, glass and ceramic manufacture, and pulp and paper manufacture. It is used for environmental protection in municipal and industrial effluent treatment plants and facilities. Oxygen also has numerous uses in healthcare, both in hospitals, outpatient treatment centers and home use. For some uses, such as effluent treatment and pulp and paper bleaching, oxygen is converted to ozone (O<sub>3</sub>), an even more reactive form, to enhance the rate of reaction and to ensure the fullest possible oxidation of undesired compounds.



#### **Water Treatment**

There has been rapid development in both the methods of reliably producing low cost oxygen and ozone and applying them to wastewater treatment problems.

Lack of oxygen can cause inadequate treatment, as well as offensive odours. Injecting oxygen into treatment plants, improve sludge settling, lower sludge load, and improve treatment capacity.

The aeration process allows bacteria and waste to be put into contact. Efficient oxygenation is essential to the success of aerobic biological treatment. In difficult cases, particularly with industrial effluents, pure oxygen boosting is a very efficient solution.

