



OXYGEN Application

O₂ APPLICATION

Oxygen (O₂) 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 (O₃), an even more reactive form, to enhance the rate of reaction and to ensure the fullest possible oxidation of undesired compounds.



Gold Mining

Adding oxygen to the air in the gas desulfurizing process results in a number of benefits, e.g. increased plant capacity, more flexibility, and improved conversion of ammonia. By using oxygen to convert mineral sulphides to sulphates and processing them, gold yield can be more than doubled over standard ore gravity separation and concentration. By sparging 94-95% oxygen into a thickened flotation concentrate (which has been heated under pressure) an oxidized slurry results. Not only are sulphides converted to sulphates by the O₂, but arsenic is converted to ferric arsenate.

