

## **200m<sup>3</sup>/h oxygen generator with 93% purity for lignin removal and bleaching**



Four months ago, XITE successfully supplied and commissioned oxygen generator equipment for a specialized paper mill. They produce paper using wheat straw, sarkanda, etc. The company has become a medium to large writing/printing paper producer.

The customer purchased the following sizes of oxygen generators from XITE

Technology: PSA technology

Capacity: 200 m<sup>3</sup>/h

Application: Delignification and bleaching

Purity: 93% oxygen

The customer experienced huge cost savings and their oxygen production costs dropped to Rs. 6 to 7 per m<sup>3</sup>. Earlier, the customer was using cylinders or bulk supply of oxygen tanks, but switched to sourcing oxygen from XITEch Engineering Ltd.

Oxygen delignification offers significant operational cost advantages and is a proven method to increase the yield of bleached kraft pulp. Oxygen (O<sub>2</sub>) delignification is one of the most important processes in pulp bleaching technology today. The process uses oxygen to reduce active chlorine demand in bleach mills and is an important step toward chlorine free (TCF) and elemental chlorine free (ECF) pulp production.

Recently, oxygen delignification has been recognized as one of the strategic technologies to increase the production yield of bleached pulp. The most important environmental impact of oxygen delignification is the reduction or elimination of adsorbable organic halides (AOX).

Bleaching, combined with oxygen delignification and other non-chlorine bleaching technologies, allows the facility to suppress emissions and meet environmental standards at a low cost. The process resulted in an increased percentage of recycled water, reduced COD emissions, and reduced color in the facility waste.

Prior to the introduction of oxygen delignification, chlorine was widely used in the paper industry to bleach pulp, which led to air and water pollution. Recently, the paper industry has adopted the use of oxygen gas for delignification and bleaching in order to reduce pollution and improve the safety of the production process.

The benefits of oxygen in these processes include.

Reduced emissions from the bleaching process

Reduced consumption of hazardous and expensive oxidizing chemicals

Reduced solids in landfills

Reduced corrosion problems

On-site oxygen production can solve chemical supply and transportation problems

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