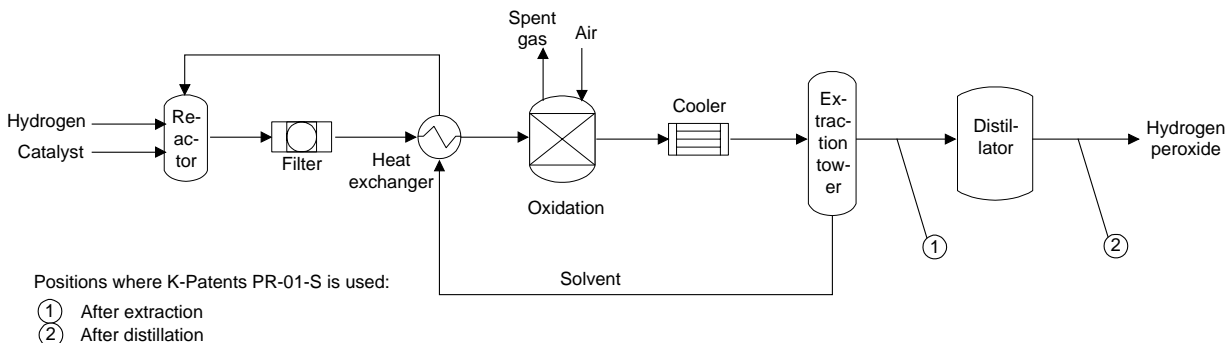


Hydrogen Peroxide



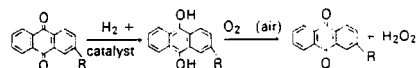
Hydrogen Peroxide, H₂O₂

Soluble in water

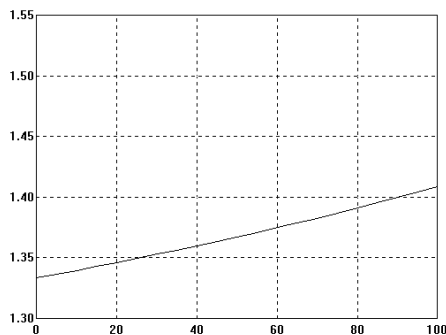
Typical end products

Chemical synthesis, metals, alloys, printed circuit board cleaning, etching, brightening, textile bleaching, paper pulp bleaching, aseptic packaging, water filtration, ink removal from waste paper

Autoxidation (AO) process



Chemical curve: R.I. per Conc% b.w.



R.I. Ref. temp 20°C

Introduction

Hydrogen peroxide is a clear, colourless, slightly viscous liquid.

Application

During recent years the use of hydrogen peroxide has increased and several new plants have been built.

Today hydrogen peroxide is manufactured in the autoxidation or AO process. The process is based on a reduction of anthraquinone followed by oxidation with the formation of H₂O₂ as a by-product.

Hydrogen peroxide is removed from the organics by extraction with water, and concentrated to produce grades of standard commercial strengths. H₂O₂ is normally sold at the concentration of 35 - 65%.

Installation

There are several different installation points in a H₂O₂ plant. Concentration measurement can be taken from the point after the extraction of peroxide. At this point the concentration is 30-40%.

After extraction H₂O₂ is purified and concentrated by distilling to the specific concentration. K-Patents Process Refractometer PR-01-S can be used in the distillation control.

Hydrogen Peroxide often contains lots of hydrogen gas bubbles which can cause disturbances and serious problems for density meters. K-Patents PR-01-S has several advantages in the H₂O₂ application. There is no measurement error caused by bubbles, color or particles. K-Patents PR-01-S can be mounted directly in the main line and the need for a sample by-pass can be eliminated.