
羟基氧化法处理水中残留丙酮的工艺研究

**Study on Treatment of Residual Acetone in Water by Hydroxyl
Oxidation**

摘要

水中有机物处理一直是污水处理的难题，并困扰着相关生产企业。特别是一些难降解、难提取的有机组分，严重影响排出水 COD 的含量，以至排出水不达标。通常水中 COD 通过化学反应过程、絮凝沉降、厌氧好氧、生化处理、过滤及膜分离等形式处理达标排放。其中第一步是关键，方式也多种多样。采取催化降解是处理有机物的最有效手段。而降解有机物，使其降解成 CO_2 和水是最清洁的好办法。羟基氧化是氧化能力最强、有机物降解最有效的一种处理模式。

根据某工厂污水处理要求，本文对生产排出水中丙酮采用羟基氧化的方式进行处理，即采用通入直流电及氧气产生羟基，循环氧化处理，直至排出水 COD 降到 150mg/L 以下。

关键词：羟基氧化 丙酮污水处理 电芬顿法

ABSTRACT

The treatment of organic matter in water has always been a difficult problem in wastewater treatment, and it has troubled the relevant production enterprises. Especially, some organic components which are difficult to degrade and extract seriously affect the COD content of the effluent, even the effluent does not meet the standard. Usually, COD in water is treated by chemical reaction, flocculation and sedimentation, anaerobic and aerobic treatment, biochemical treatment, filtration and membrane separation. The first step is the key, and there are many ways. Catalytic degradation is the most effective way to treat organic matter. Degrading organic matter into CO₂ and water is the best way to clean it. Hydroxyl oxidation is the most effective treatment mode with the strongest oxidation ability and the most effective degradation of organic matter.

According to the requirement of sewage treatment in a factory, acetone in the effluent of production was treated by hydroxyl oxidation, that is, hydroxyl was produced by direct current and oxygen, and then oxidized by circulation until the COD of the effluent was reduced to below 150 mg/L.

Key words: Hydroxyacetone oxidation wastewater treatment by electrofenton process

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