

# 年产 7.2 万吨苯酐工艺设计

## 摘 要

苯酐作为一种基本化工原料，经常在染料、医药、增塑剂等生产行业中使用。最早的方法是萘与空气催化后进行氧化生成苯酐，现在邻二甲苯与空气进行催化氧化这种方法被工厂应用最多，手段也比较成熟。主要的生产过程是，气化后的邻二甲苯与过滤净化后的空气混合，进入反应器生成粗苯酐，冷凝器进行气体粗苯酐的收集，精馏塔对粗苯酐进行精馏，最后得到产品。此方法可以参考的资料也较多，所以本次设计采用该工艺。

本次设计生产 7.2 万吨的苯酐，进行了物料衡算、能量衡算、以及设备的选型计算等，画带控制点的工艺流程图（PID图）和设备布置图。

**关键词：**工艺设计；邻二甲苯；苯酐

## ABSTRACT

As a basic chemical raw material, phthalic anhydride is often used in dye, medicine, plasticizer and other production industries. The earliest method is naphthalene and air catalytic oxidation of anhydride, now o-xylene and air catalytic oxidation of this method has been most used in factories, means are also relatively mature. The main production process is that the gasified o-xylene is mixed with the filtered and purified air, which enters the reactor to produce crude anhydride, which is collected by the condenser and rectified by the distillation tower. This method can refer to more information, so this design adopts this process.

The design and production of 72,000 tons of phthalic anhydride, the material balance, energy balance, and equipment selection calculation, draw the process flow chart (PID diagram) and equipment layout diagram with control points

**Key words:** process design;o-xylene;phthalic anhydride

# 目 录

|                         |   |
|-------------------------|---|
| 前 言.....                | 1 |
| 第 1 章 绪论.....           | 2 |
| 1.1 设计依据、指导思想及设计原则..... | 2 |
| 1.1.1 设计依据.....         | 2 |
| 1.1.2 指导思想.....         | 2 |
| 1.1.3 设计原则.....         | 2 |
| 1.2 厂址的选择.....          | 3 |
| 1.2.1 厂址的选择原则.....      | 3 |
| 1.2.2 此次厂址选择的具体方位.....  | 3 |
| 1.3 设计地区的自然条件.....      | 3 |
| 1.3.1 园区概况.....         | 3 |
| 1.3.2 发展优势.....         | 4 |
| 1.4 车间布置和生产制度.....      | 4 |
| 1.4.1 车间布置.....         | 4 |
| 1.4.2 生产制度.....         | 4 |
| 1.5 工厂的设备节能与环境保护.....   | 5 |
| 1.6 安全技术和安全防火.....      | 5 |
| 第 2 章 合成工艺流程.....       | 6 |
| 2.1 苯酐的生产方法.....        | 6 |
| 2.2 主要原料规格.....         | 7 |
| 2.3 产品规格.....           | 7 |
| 2.4 合成工艺简述.....         | 8 |
| 2.4.1 氧化反应.....         | 9 |
| 2.4.2 冷凝回收.....         | 9 |

|                |   |
|----------------|---|
| 2.4.3 预处理..... | 9 |
|----------------|---|

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