

# 肉类加工厂 600m<sup>3</sup>/d 生产废水处理工艺设计

## 摘 要

伴随着城市经济的提高展，城市规模和工业不断扩展，带来了大量的生活使用污水和工业废水，肉类加工废水就是其中之一。其中就包括最典型的一种：肉类加工生产废水。该类水质特点是“三高”，即：氨氮的浓度高、有机物的浓度高、悬浮物的浓度高。如果该类水质没有得到任何处理而直接对外排放，将会对环境造成不可估量的破坏，因此必须通过处理并且达到标准后才能排放。

该工程设计的原始资料和数据来源于教学设计任务书，主要任务是完成对该污水处理厂的设计。每天处理水量 600m<sup>3</sup> 是该污水处理厂的设计要求。原肉类加工废水中含氮量较高，进水水质指标：COD<sub>cr</sub>=1000 ~ 2000mg/L，BOD<sub>5</sub>=500 ~ 800mg/L，SS=1000 ~ 1500mg/L，NH<sub>3</sub>-N=40~60mg/L。按照废水水质特点及对各种工艺的优缺点相比较，选用 UASB+A/O 为核心的处理方法。它具有工艺简单、投资陈本低、良好的沉淀效果。经过工艺流程处理后，肉类加工废水水质可达到《肉类加工工业水污染物排放标准》（GB13457-92）一级标准，即出水水质指标：COD<sub>cr</sub>≤80mg/L，BOD<sub>5</sub>≤25mg/L，SS≤60mg/L，NH<sub>3</sub>-N≤15mg/L。

**关键词：**肉类加工废水；有机物；氨氮；悬浮物；UASB+A/O

## Abstract

Along with the development of urban economy, the city scale and industrial expansion have brought a large amount of domestic sewage and industrial wastewater, among which meat processing wastewater is one. This includes one of the most typical: waste water from meat processing. This kind of water quality is characterized by "three high", that is, the concentration of ammonia nitrogen is high, the concentration of organic matter is high, the concentration of suspended solids is high. If this kind of water is discharged directly without any treatment, it will cause immeasurable damage to the environment, so it must be treated and meet the standard before it can be discharged.

The design of the original materials and data from the teaching design task book, the main task is to complete the design of the sewage treatment plant. 600m<sup>3</sup> of water per day is the design requirement of this sewage treatment plant. The nitrogen content of raw meat processing wastewater was relatively high, and the inlet water quality indexes were: COD<sub>cr</sub>=1000 ~ 2000mg/L, BOD<sub>5</sub>=500 ~ 800mg/L, SS=1000 ~ 1500mg/L, NH<sub>3</sub>-N=40 ~ 60mg/L. According to the characteristics of wastewater quality and the advantages and disadvantages of various processes, UASB+A/O was selected as the core treatment method. It has simple process, low investment cost and good precipitation effect. After processing, the water quality of meat processing wastewater can reach the first-level standard of discharge standard of water pollutants for meat processing industry (GB13457-92), that is, the effluent water quality index: COD<sub>cr</sub>≤80mg/L, BOD<sub>5</sub>≤25mg/L, SS≤60mg/L, NH<sub>3</sub>-N≤15mg/L.

**“Key words”** : Meat processing wastewater; Organic matter; Ammonia nitrogen; Suspended solids; UASB + A/O

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