吉林省舒兰市污水处理工程设计

摘　　要

近些年，我国越来越重视环境的保护和治理，由城市生活产生的城镇污水的处理被把控得越来越严格，排放标准逐渐升高，相应得，处理工艺也在过去的基础上不断优化。

本次设计需要完成一座污水厂的初步设计，拟定可行性工艺流程，提高对污水处理厂设计的认识。本次项目总规模为 92315 吨/日，除了需要降低有机物浓度之外还需要降低氨氮浓度，若是在处理水量较大的同时还需要处理氮或磷，一般的曝气池不能达到出水水质，需要和厌氧池或缺氧池联合，所以最终选定 A^2/O 池。处理工艺大致如下：污水先进入中格栅，然后通过提升泵房提升高程，再到细格栅进一步拦渣，之后先后进曝气沉砂池和平流初沉池，到此结束一级处理，出来的水进 A^2/O 池生化处理，再到二沉池沉淀，最后到接触消毒池消毒的水可以排出污水厂。通过此工艺流程，污水出水水质可以达到国家污水综合排放标准一级标准 B 标准。

关键词：城市污水；A^2/O 池；一级 B 标准

Abstract

In recent years, more and more attention has been paid to the protection and treatment of environment in our country. The treatment of urban sewage produced by city life has been controlled more strictly, and the discharge standard has been raised gradually. Accordingly, the treatment process has been optimized on the basis of the past.

This design needs to complete the preliminary design of a sewage plant, draw up the feasible process flow, improve the understanding of the sewage treatment design. The total scale of this project is 92,315 tons per day, which requires a reduction in ammonia nitrogen concentration in addition to the reduction in organic matter concentration. If we need to deal with nitrogen or phosphorus as well as large amount of water, the general aeration tank can not reach the quality of effluent, it needs to be combined with anaerobic tank or anoxic tank, so the A^2/O tank is finally selected. The treatment process is as follows:The sewage first enters the middle grille, then through the lift pup room elevation, and then goes to the fine grille further intercepts the slag, and then enters successively the aerated grit chamber and the advection primary sediment chanber, then finishes the primary treatment, the sewage enters the A^2/O tank biochemical treatment, then goes to the secondary sedimentation tank, and finally to the contact disinfection tank to disinfect the water, that can be discharged from the sewage plant. Through this process, the effluent quality can reach the first grade standard B of the national comprehensive sewage discharge standard.

Key words: Urban Sewage; A2/O Tank; First Class B Standard

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