9.6×10⁶ Nm³/h 烟气脱硫项目氯化亚砜合成与精制工段工艺设计

摘　要：本文对 9.6×10⁶ Nm³/h 烟气脱硫项目的氯化亚砜合成与精制工段进行工艺设计。首先介绍了产品和生产制度，然后简介了国内外氯化亚砜生产现状和生产工艺，对生产方法的选择进行论证，接着对工艺流程进行描述并画出流程简图，运用 Aspen Plus 软件对氯化亚砜合成与精制工段进行模拟得到物料衡算与能量衡算结果，然后对设备设计进行计算和选型，运用 CUP-Tower 软件作出校核，并运用 SW6-2011 对机械强度进行校核，强度满足条件，此外，还对标准设备换热器、泵进行了选型。接着分析了本项目的污染源和污染物，以及治理措施，接着对本项目作出了投资估算以及经济分析，作出结论与展望。最后对氯化亚砜合成与精制工段进行了车间布置，并绘制出车间布置图。

关键词：氯化亚砜；生产工艺；Aspen Plus；CUP-Tower；SW6-2011

The Process Design of sulfoxide chloride synthesis Product Refining for 9.6×10^6 Nm^3/h FGD Project

Abstract： In this paper, the process design of the synthesis and refining section of sulfoxide chloride in 9.6×10^6 Nm^3/h flue gas desulfurization project was carried out. Products and production system is introduced first, and then introduced the status quo of sulfoxide chloride production at home and abroad and the production process, the selection of production methods, and then to describe and draw a process flow diagram, using Aspen Plus software for simulating sulfoxide chloride synthesis and refining process of material balance and energy balance as a result, then the calculation and design of equipment selection, the use of CUP Tower to check software, and use SW6-2011 to check of mechanical strength, strength meet the conditions, in addition, also for standard equipment heat exchanger, pump selection. Then, the pollution sources and pollutants of the project are analyzed, and the treatment measures are taken. Then, the investment estimation and economic analysis of the project are made, and the conclusions and prospects are made. Finally, the workshop layout of sulfoxide chloride synthesis and refining section was carried out, and the workshop layout was drawn.

Key words： Thionyl chloride；manufacturing technique；Aspen Plus；CUP-Tower；SW6-2011