原子能科学技术 2009 43 (增刊): 191-196 ISSN: 1000-6931 CN: 11-2044/TL

技术及应用

核电站温排水的热污染控制对策

刘永叶[1];刘森林[1];陈晓秋[2]

1.中国原子能科学研究院，北京102413 2.环境保护部 核与辐射安全中心，北京100082

收稿日期 修回日期 网络版发布日期:

摘要 核电站温排水的余热排放对生态环境造成的负面热影响（即热污染）已日益引起社会关注。文章基于国内现有的温排放控制标准可执行性不强以及电厂温排水余热的利用方式单一、利用效率不高的现状，提出我国现阶段核电站温排水的热污染控制需从温度标准制定（即温排水混合区若干关键控制参数的确定）和温排水余热的综合利用途径的开发这两方面入手，同时开展深入细致的研究。在对国外的主要余热利用途径和国内火电厂余热利用途径调研、分析的基础上，提出了结合生态工程原理进行温排水余热综合利用方案设计的建议。

关键词 核电站 温排水 热污染 混合区 余热利用 对策 生态工程

分类号

Control Countermeasures About Thermal Pollution of Thermal Discharge From Nuclear Power Plants

LIU Yong-ye[1];LIU Sen-lin[1];CHEN Xiao-qiu[2]

1.China Institute of Atomic Energy, P. O. Box 275-24, Beijing 102413, China; 2.Nuclear and Radiation Safety Centre, Ministry of Environmental Protection, Beijing 100082, China

Abstract The negative thermal effects (i.e. thermal pollution) on the environment caused by the waste heat emissions of thermal discharge from nuclear power plants have attracted public attention increasingly. The existing domestic standards for temperature control about thermal discharge are inadequate to enforce, and the means of waste heat utilization are single, with low utilization efficiency. Based on the status quo, some control countermeasures at the present stage about thermal pollution of thermal discharge from nuclear power plants were pointed out, one is to establish control standards on water temperature (i.e. determination of several key control parameters of mixing zone), the other is to develop comprehensive utilization means of waste heat from thermal discharge. And a thorough and meticulous research with these two aspects should be carried out at the same time. The suggestion of designing a comprehensive warm water utilization method using ecological engineering principles was put forward.

Key words nuclear power plant _ thermal discharge _ thermal pollution; mixing zone _ waste heat utilization _ countermeasure _ ecological engineering

DOI

扩展功能

本文信息

Supporting info

[PDF全文](942KB)

[HTML全文](0KB)

参考文献

服务与反馈

把本文推荐给朋友

文章反馈

浏览反馈信息

相关信息

本刊中 包含“核电站”的 相关文章

本文作者相关文章

- 刘永叶
- 刘森林
- 陈晓秋

通讯作者