

中国CO2集中排放源调查及其分布特征

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收稿日期 2005-4-13 修回日期 2005-8-1 网络版发布日期 2007-1-17 接受日期 2005-4-13

摘要 由于中国经济的快速发展以及对化石能源的过度依赖, 大量排放CO2致使面临的环境压力和国际压力越来越大。为减少CO2排放, 需详细调查CO2排放源尤其是工业集中点源的现状。在对2004年中国火电、水泥、钢铁、炼油、乙烯、合成氨、环氧乙烷、制氢8类企业生产数据调查的基础上, 计算了2004年中国这些企业的CO2排放量, 绘制了集中点排放源的全国分布图, 同时给出了大规模和高浓度CO2排放源分布图。在此基础上分析了其空间分布特征。2004年8类企业总排放量为 29.6315×10^8 t, 其中, 火电、水泥、钢铁企业总排放量为

27.1631×10^8 t, 约占91.7%。采用同样的方法, 依据统计数据计算了1998~2002年火电、水泥、钢铁三类企业排放量并分析了其增长特征。统计结果表明, 3类企业CO2排放量年均增长率达9.7%, 到2000年后呈加速增长趋势。

关键词 [环境工程](#); [二氧化碳](#); [集中点排放源](#); [排放量](#); [分布图](#)

分类号

PRELIMINARY STUDY ON CO2 INDUSTRIAL POINT SOURCES AND THEIR DISTRIBUTION IN CHINA

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Abstract

With the rapid development of Chinese economy and the excessively relying on the fossil energy, the emission of CO2 is becoming the serious issue. This will cause a heavy pressure on the nature environment and the international society. In order to reduce the emission of CO2, the current status of Chinese CO2 emission sources should be investigated first. In this paper, the total amount of CO2 emission from the major industrial sources (power plants, cement production, steelworks, refineries, ethylene, ammonia, ethylene oxide and hydrogen) in China is estimated to be 29.6315×10^8 t with the production data of the above various plants. Meanwhile, the distribution maps of the eight sorts of sources, large-scale sources and high concentration sources are presented. Power plants, cement and steel are the top three CO2 emitters, which account for about 91.7% of the total emissions. Using the same method, the emissions of 1998–2002 of these three plants are calculated according to the open statistic data. It can be concluded that the emissions are increasing remarkably at the average rate of 9.7% since 1998.

Key words [environmental engineering](#); [carbon dioxide](#); [point sources](#); [emission](#); [distribution](#)

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