

综述与专论

过程系统工程技术与中国石化可持续发展

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收稿日期 2007-7-2 修回日期 网络版发布日期 2007-10-11 接受日期

摘要

石油化工行业是国民经济的重要基础和支柱产业，中国石化集团公司作为中国最大的油品和石化产品生产商及经销商，已步入世界大型能源化工公司行列。过程系统工程（PSE）技术在中国石化结构调整、技术创新、降本增效、节能降耗、环境保护、安全生产、科学决策等诸多方面都起到了重要的作用，有效促进了中国石化科技进步和生产发展。企业资源计划（ERP）系统成功上线；初步形成供应链体系；全面启动总部生产营运指挥系统建设；电子商务系统长周期在线运行等。中国石化积极推进可持续发展，积极调整结构，强化技术改造，大幅降低能源消耗水平；全面推进清洁生产，从源头减少污染；努力节能降耗，提高资源和能源利用效率；不断完善安全、环境、健康（HSE）管理体系。坚持不懈地开展PSE技术的研究与应用，是中国石化可持续发展的内在要求与必然选择。

关键词 [过程系统工程](#) [中国石化](#) [可持续发展](#)

分类号

Process system engineering technology and sustainable development of Sinopec

Abstract

Petrochemical industry is a fundamental and pillar industry of the national economy. As China's largest refiner and distributor of petroleum and petrochemical products, China Petrochemical Corporation (Sinopec) has become one of the world's large scale energy and chemical companies. Its achievements are closely connected with comprehensive development of process system engineering(PSE) technology, which plays a major role in Sinopec's restructuring, technological innovation, energy saving, cost and consumption reduction, environment protection, safety in production and scientific decision making, effectively promoting scientific and technological progress and production growth, and enhancing Sinopec's competitiveness. Enterprise resource planning(ERP) has been successfully applied and a supply chain system has been preliminary established. The production and operation management system has been established in Sinopec headquarters and e-commerce system has maintained long cycle on-line operation. Sinopec adheres to the scientific concept of development to promote sustainable development by emphasizing structure readjustment, technological revamping and significant energy consumption reduction. Clean production has been comprehensively promoted with focus on prevention from the source. Efforts have been made in energy conservation and consumption reduction to enhance resource and energy efficiency. Health, safety and environment management system has been established and improved continuously. It is an internal requirement and necessary choice for Sinopec to focus on research and application of PSE technology.

Key words [process systems engineering](#) [China petrochemical corporation](#) [sustainable development](#)

DOI:

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