中荷洁净煤技术研讨会

北京 1995年6月15-16日

Sino-Dutch Seminar
Clean Coal Technology

Beijing, 15-16 June, 1995

中荷洁净煤技术研讨会

会　议　录

1995 年 6 月 15 日～16 日，北京

SINO - DUTCH SEMINAR ON CLEAN COAL TECHNOLOGY

PROCEEDINGS

BEIJING, 15 - 16 JUNE 1995

SSTC
中国国家科学技术委员会
STATE SCIENCE AND TECHNOLOGY COMMISSION, CHINA
NOVEM
荷兰王国能源与环境总署
NETHERLANDS AGENCY FOR ENERGY AND THE ENVIRONMENT

COLOPHON
编辑名录

Client	: Novem, the Netherlands Agency for Energy and the Environment
项目委托方	: 诺温，荷兰政府的能源与环境总署
Project	: Proceedings "Sino-Dutch Seminar on Clean Coal Technology", Beijing, China
项目名称	: 论文集 "中荷洁净煤技术研讨会"，中国北京
Length of report	: 506 pages
页数	: 506页
Contributions	: H.E. Mr. Wim Kok; H.E. Mr. Song Jian; SSTC (Industry Technology Dept.); Min. of El. Power (Planning Dept., Science & Technology Dept.); State Administration for Building Materials Industry (Science & Technology Dept.); Tianjin El. Power Company; Dutch Min. of Economic Affairs; NOVEM; Dutch El. Generating Board (N.V. Sep); Shell Internationale Petroleummij.; Stork Comprimo; International Flame Research Institute; Delft Univ. of Technology; Geological Survey of the Netherlands; Netherlands Energy Research Foundation; RIVM; APM Consultants; Envirotech Pumpsystems; KEMA; Nuon; Stork Ketels; Hoogovens; Gyvlon;
作者	: 中国国务委员兼国家科委主任 宋健 先生；荷兰王国首相科克先生；中国国家科学技术委员会工业科技司；中国电力部科技司；中国建材工业局科技司；天津市电力公司；荷兰王国经济部能源司 (EZ)；诺温 荷兰能源与环境总署 (NOVEM)；荷兰教育 科学与文化部；荷兰住房 空间规划和环境部 (VROM)；荷兰发电署；荷兰能源研究基金会；荷兰公共卫生与环境保护研究所；荷兰对外贸易办事处 (EVD)；荷兰能源供应公司；荷兰地质勘测院；国际火焰研究基金会；代尔夫特科技大学；霍高文工程技术能源环境公司；环境技术泵组荷兰公司；KEMA 公司；APM 咨询公司；Gyvlon 贸易公司；斯托克锅炉公司；斯托克康普瑞莫公司；荷兰皇家壳牌集团(Shell).
Production Netherlands	: Sino Dutch techno trade office (Kees Bodegom)
项目经理	: 凯斯 包德刚 先生
Production China	: DHV China (Bastiaan Bink), ITEESA (Wang Yan Jia)
项目经理	: 赛滨客先生 (中国 DHV)，王颜佳女士 (清华大学)
Translations	: Tsinghua University ITEESA and Li Hua
翻译	: 清华大学技术与能源系统分析研究所和华丽女士
Editing English, layout, design	: DHV China and Sino Dutch techno trade office
英文编辑、版面设计	: 中国 DHV 和 荷兰凯胜国际发展有限公司
Editing Chinese	: Kewen Jingmao Zonggonsi
中文编辑，编辑组长	: 赵云舫女士，李铁柱先生 (科文经贸总公司)
Cover	: Van Kouteren's Uitgeversbedrijf B.V., Rotterdam, Netherlands
封面	: Van Kouteren's，出版社，鹿特丹，荷兰
Publisher	: Kewen Jingmao Gongsi, Haidian district, Baishiqiao Lu 39, Beijing
出版社	: 科文经贸总公司，海淀区，白石桥路 39 号，北京图书馆 K 栋一层
Date	: 27 September 1996
日期	: 1996年9月27日
Authorization	: J. Stork, NOVEM
项目总负责	: 斯托克先生，诺温

目　录

TABLE OF CONTENTS

机构介绍（Company Profiles）

前　言

中荷洁净煤技术研讨会是由中国国家科学技术委员会与荷兰王国经济部、荷兰能源环境署共同组织的一次大型双边会议。

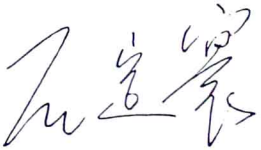
会议的宗旨是促进中荷两国在洁净煤技术领域在发展战略、政策、规划以及技术等方面的交流，促进双方企业间的联系，推动双方政府决策部门及与会者在洁净煤技术转移和贸易方面的直接交往，增强双方政府管理部门、研究单位以及企业之间的交往与合作。

当前中国经济迅速增长，对能源的需求大幅度提高，对相关的环境问题也提出了新的要求，中国政府已提出了经济、环境协调发展的总体目标和可持续发展战略，并制定了二十一世纪议程，在国家科技计划中，将洁净煤技术放在十分重要的位置，集中力量，加强研究开发与应用示范。

我们知道，荷兰王国在洁净煤技术开发、推广应用和政策措施等方面取得了可喜的成绩，积累了宝贵的经验，这次在荷兰首相访华之际召开的洁净煤技术研讨会，给随行的荷兰政府官员和企业界人士了解中国在这一领域的技术水平、市场潜力和发展方向等方面提供了一次非常好的机会，这对促进双方在科技、经贸领域广泛的合作起到了积极的推动作用。

希望此次出版的会议论文集，为促进和推动双方在这领域的全面合作，提供有益的帮助。

中国国家科委工业科技司



司长　石定寰

一九九六年五月

Foreword

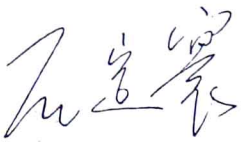
Sino－Dutch Seminar on Clean Coal Technology was a large bilateral Seminar organized jointly by the State Science and Technology Commission (SSTC) of China and the Ministry of Economic Affairs and the Netherlands Agency for Energy and the Environment (Novem).

The objective of this seminar was to expedite the interchange of technologies, policies, strategies and planning in the area of CCT between China and the Netherlands, to tighten the relationship of enterprises on both sides, to animate the direct association between governmental decision－making agencies and participants on CCT transference and trade, and to enhance the cooperation between administrative departments, institutes and enterprises.

Currently, China' s economy is growing rapidly, energy demand increases and the environmental problem becomes more and more serious correspondingly. The Chinese government has brought out the aggregate objectives of economic and environmental concordant development and the strategies of sustainable development, and also enacted the " Agenda of 21 Century". The CCT will take a very important place in the national planning of science and technology development, for which research and development and application & demonstration will be focused with more attention.

As we know, there are attractive achievement and valuable experiences in the development, dissemination and promotion policies of CCT in Netherlands. This was a very good opportunity for the Dutch officials and entrepreneurs to understand the technical level, market potential and development tendency in this area in China when the Prime Minister of Netherlands visited China and participated in the Seminar of CCT. It also will play an important role to further the bilateral cooperation widely in the fields of technology transference and trade.

Hopefully the publication of this proceedings will provide wonderful help for our joint cooperation.



Shi Dinghuan

Department of Industrial Science and Technology of SSTC

前　言

煤是我们两国重要的燃料。煤的优势众所周知，遗憾的是其不利一面，特别是对环境的影响也不可否认。解决的办法是存在的，洁净煤技术在这方面起着一个重要的作用。近十年来，洁净煤技术的发展极为惊人。

中国是世界上最大的产煤和用煤国家，世界上11%的煤储藏量在中国，其对洁净煤技术的积极态度也是众所周知的。

我乐意在这次中一荷讨论会中介绍一批来自荷兰工业和科技界的专家，他们密切地参与了荷兰洁净煤技术的开发和实施。在这份文件夹中，您将见到将在此次讨论会中演讲的内容摘要，以及公司简介、技术手册。此文件夹包含了访问的内容。

技术仅是一幅画的一面，贯彻和合作组成了另一面，两者缺一不可。我相信这次讨论会将促进中国和西方的中国人一荷兰之间在洁净煤技术领域中的合作。我还确信讨论会的演讲和个别接触将加深彼此对双方能力和特殊愿望的了解。

我衷心希望我们两国之间存在的友好关系将使我们在洁净煤领域共同受益。

劳琳斯·内特
(Laurens Knegt)
代表团团长
经济部能源司副秘书长

FOREWORD

Coal is an important fuel for both the Netherlands and the People's Republic of China. This is, however, also especially true for its main disadvantage: the negative environmental impact.

Solutions do exist. Clean coal technology plays an important role in this respect. During the last decade its development has been astonishing.

China is the single biggest producer and consumer of coal in the world. Eleven per cent of world's coal reserves are situated there. It is a well-known fact that China takes an active approach towards clean coal technology.

It is a pleasure for me to introduce to this Sino-Dutch seminar a group of Netherlands experts from industry and research institutes, who are closely involved in the development and implementation of clean coal technology in the Netherlands.

In this portfolio you will find abstracts of presentations to be made during the seminar together with company profiles and technical brochures. It may be looked upon as a visiting card comprising all the credentials of the group.

Technology is one side of the picture, implementation and co-operation form another one. Both sides are needed. I trust that this seminar will promote a closer cooperation in the field of clean coal technology between China and the Dutch, who are sometimes even referred to as 'the Chinese of the West'.

I am convinced that both the presentations and the personal contacts to be made during this seminar will lead to a greater under standing of each other's capabilities and specific wishes.

I hope that, also with respect to clean coal, the good relations between our countries will lead to mutual benefit.

Laurens Knegt
Deputy Director-General for Energy
Ministry of Economic affairs
The Netherlands

中荷洁净煤技术研讨会主席台名单
(CHINESE AND DUTCH OFFICIALS)

1. 荷兰王国首相　维姆·科克(H. E. Mr　W. Kok, Prime Minister, Minister for General Affairs, The Kingdom of the Netherlands)
2. 中国国务委员兼国家科委主任　宋健(H. E. Mr. Song Jian, State Counsellor and Chairman of State Science and Technology Commission, China)
3. 荷兰王国副首相兼外交大臣　范米尔洛(H. E. Mr. Van Mierlo, Deputy Prime Minister, Minister for Foreign Affairs, Netherlands)
4. 中国政府陪同团团长、水利部部长　钮茂生(Mr. Niu Maosheng, Minister, Ministry of Water Resources, China)
5. 荷兰王国驻华大使　郝德扬(H. E. Mr. Van Houten, Ambassador of The Kingdom of the Netherlands to the People's Republic of China)
6. 中国国家科委副主任　徐冠华(Mr. Xu Guanhua, Vice Chairman of State Science and Technology Commission, China)
7. 荷兰王国经济部对外经济关系总司司长　安赫英(Mr. Engering, Director—General of Foreign Economic Relations, Ministry of Economic Affairs, Netherlands)
8. 中国化工部副部长　成思危(Mr. Cheng Siwei, Vice Minister, Ministry of Chemical Industry, China)
9. 荷兰王国外交部政治总司司长　沃斯(Mr. Vos, Director—General Political Affairs, Ministry of Foreign Affairs, Netherlands)
10. 中国国家环保局局长　解振华(Mr. Xie Zhenhua, Administrator, National Environmental Protection Agency, China)
11. 荷兰王国首相府副秘书长　默克尔巴赫(Mr. Merckelbach, Deputy Secretary—General of the Ministry of General Affairs, the Netherlands)

12. 中国驻荷兰王国大使　吴键民(Mr. Wu Jianmin, Ambassador of the People's Republic of China to The Kingdom of the Netherlands)

13. 荷兰王国经济部能源总局副总局长　内特(Mr. Knegt, Deputy Director — General for Energy, Ministry of Economic Affairs, Netherlands)

14. 中国国家科委工业科技司司长　石定寰(Mr. Shi Dinghuan, Director—General, Department of Industry Science—Technology, State Science and Technology Commission, China)

15. 荷兰王国能源环境署能源转换、运输与国际事务主任　范卢伊特(Mr. Van Luyt, Director, Energy Supply, Transport and International Affairs, NOVEM, Netherlands)

16. 中国电力部科技司司长　郑企仁(Mrs. Zheng Qiren, Director—General, Department of Science and Technology, Ministry of Electric Power, China)

17. 中国外交部西欧司副司长　周子忠(Mr. Zhou Zizhong, Deputy Director—General, Department of West European Affairs, Ministry of Foreign Affairs, China)

18. 住房、空间规划和环境部环境管理总署　范奥芬(Mr. A. W. F. van Alphen, Deputy Director Air and Energy, Directorate — General for Environmental Protection, Ministry of Housing, Spatial Planning and the Environment)

19. 经济部能源总司电力局煤炭和原子能处　考特福(Mr. R. M. Korthof, Senior Advisor Energy, Directorate General for Energy, Ministry of Economic Affairs)

20. 教育、科学与文化部自然与工程科学处处长　布鲁斯特豪森(Mr. E. Broesterhuizen, Division Head Natural and Engineering Sciences, Ministry of Education, Culture and Science)

21. 荷兰能源与环境总署　斯托克(Mr. J. Stork, The Netherlands Agency for Energy and Environment)

22. 荷兰王国驻华商务参赞　柯翰恩 (Mr. J. S. Kramer, Commercial Counsellor of The Kingdom of the Netherlands to the People's Republic of China)

开　幕　词

OPENING SPEECH

荷　兰　首　相
Prime Minister of the Netherlands
维姆·科克先生
Mr. Wim Kok