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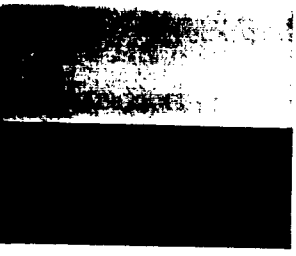
Topics:
Coal liquefaction
Fuel oils
Synthetic fuels
Methanol fuels
Coal
Coal cleaning

EPRI AP-5043-SR
Proceedings
April 1987



Proceedings: Eleventh Annual EPRI Contractors' Conference on Clean Liquid and Solid Fuels

Prepared by
Electric Power Research Institute
Palo Alto, California

REPORT SUMMARY

SUBJECTS: Coal-derived liquids / Coal preparation and analysis

TOPICS:
- Coal liquefaction
- Fuel oils
- Synthetic fuels
- Methanol fuels
- Coal
- Coal cleaning

AUDIENCE: Fuels engineers / R&D scientists

Proceedings: Eleventh Annual EPRI Contractors' Conference on Clean Liquid and Solid Fuels

The eleventh conference on clean liquid and solid fuels presented some interesting results in the traditional information areas of advanced coal liquefaction, coal-oil coprocessing, and methanol synthesis. Participants at this conference emphasized once-through methanol synthesis for gasification power plants and coal upgrading much more than those at previous conferences.

OBJECTIVE: To provide a forum for exchanging information among researchers, EPRI staff, and representatives of utilities and government agencies on the production of clean liquid and solid fuels from coal.

APPROACH: More than 100 conference participants met May 7–9, 1986 in Palo Alto. The 26 presentations included the following topics:

- Advanced coal liquefaction in the United States and Japan
- Coprocessing of coal and heavy oils
- Methanol synthesis from CO-rich gas for use in gasifier combined-cycle power plants
- Coal science, including the structure of subbituminous coal and lignite
- Coal upgrading, including de-ashing and dewatering of low-rank coal by oil agglomeration and geologic treatment of coals
- Storage compatibility of fuel oils

KEY POINTS:
- The work on two-stage liquefaction at the Wilsonville, Pennsylvania, Advanced Coal Liquefaction R&D Facility is proceeding well. A report on the early results from close coupling of the two stages indicated that close coupling the reactors increases liquid product yield.
- Bench-scale tests on coprocessing of coals and heavy residua suggest that coprocessing is an attractive option to coal liquefaction or heavy oil upgrading alone. Coprocessing is also a promising route for early introduction of coal-derived fuels into the marketplace.

- Technology development for partially converting synthesis gas to methanol in an integrated-gasification–combined-cycle power plant is maturing. Papers described work at scales ranging from the laboratory through planning for a 35-t/d demonstration.
- Oil agglomeration appears to be a good way to dewater low-rank coals.
- Biologic coal conversion is progressing at a rapid pace.

PROJECT

EPRI Project Manager: Howard E. Lebowitz
Advanced Power Systems Division

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Palo Alto, California
May 7–9, 1986

Conference Organizer
H. E. Lebowitz
Electric Power Research Institute

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NOTICE

ABSTRACT

EPRI's Eleventh Annual Contractors' Conference on Clean Liquid and Solid Fuels was held on May 7-9 1986 in Palo Alto, California. The Conference featured results of work on coal science, coal liquefaction, methanol production, coal oil coprocessing and coal upgrading.

PREFACE

The Clean Liquid and Solid Fuels Contractors' Conference was held on May 7-9, 1986 in Palo Alto, California. Presentations were given in the following areas:

- Two-stage liquefaction of coal in the United States and Japan
- Synthesis of methanol from CO-rich gas for use in gasifier combined-cycle power plants
- Coal science, including the structure of subbituminous coal and lignite
- Coal upgrading, including de-ashing and dewatering of low-rank coal by oil agglomeration and geological treatment of coals
- Coprocessing of coal and heavy oils
- Storage compatibility of fuel oils

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