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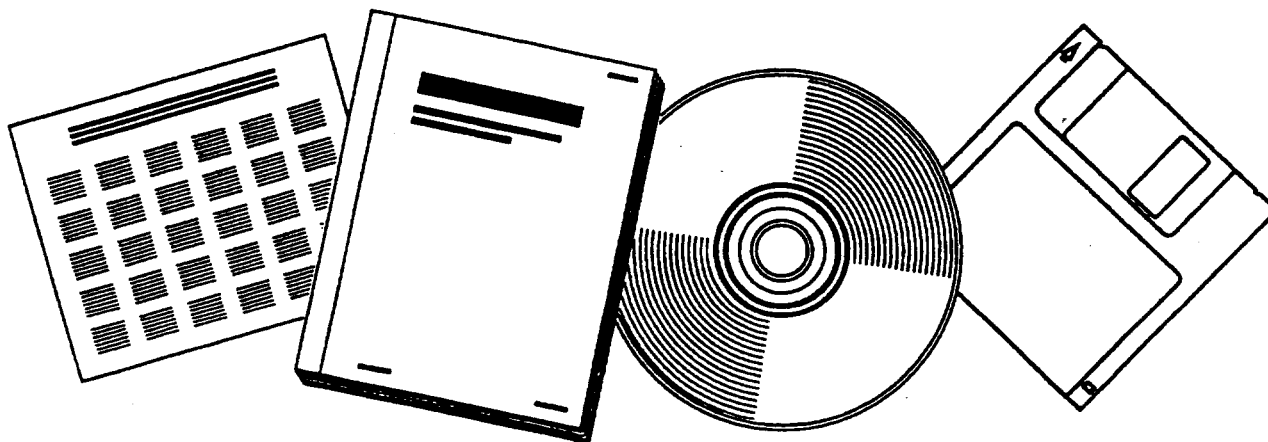
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PROCEEDINGS OF THE DOE CONTRACTORS' CONFERENCE ON INDIRECT LIQUEFACTION

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DEPARTMENT OF ENERGY, PITTSBURGH, PA.
PITTSBURGH ENERGY TECHNOLOGY CENTER

1983



U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

CONF-8310252--

DE84 005789

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FOREWORD

An Indirect Liquefaction Contractors' Conference was held on October 12-13, 1983 at the Holiday Inn/Greentree, Pittsburgh, PA. The meeting was held for the purpose of reviewing the status of research and development work being sponsored by the DOE in support of Indirect Liquefaction Technology process development. A second purpose was the promotion of a technical exchange among the DOE contractors and PETC in-house research personnel and the gaining of insight into how individual projects dovetail to support the overall program.

Specific objectives intended were: to review updated project results, to enable contractors working in the subject area to discuss and exchange information, and to provide DOE's input into the review of the subject area.

These proceedings consist of the meeting agenda, the list of attendees, and copies of the nonconfidential versions of the presentations.

The U.S. Department of Energy thanks the participants for attending this meeting, and the speakers for preparing and giving the presentations.

Liquefaction Project Management Branch would also like to acknowledge our thanks to Mr. William Jones, HQ Program Manager, and Dr. John Shen, HQ, whose suggestions contributed to the success of the conference.

George Cinquegrane, Liquefaction Project Management Branch/PETC

AGENDA

DOE Contractors' Conference Indirect Liquefaction

October 12-13, 1983
Pittsburgh, Pennsylvania
Holiday Inn/Greentree

Wednesday, October 12

7:45 a.m.	Registration
8:20 a.m.	Call to Order
8:25 a.m.	Welcome — <i>A. Sharkey, Deputy Director, PETC/DOE</i>
8:30 a.m.	Two-Stage Slurry FT/ZSM-5 Process — <i>J. C. W. Kuo, Mobil</i>
9:10 a.m.	Questions and Answers
9:20 a.m.	Indirect Liquefaction Catalyst Development — <i>P. Dyer, Air Products & Chemicals, Inc.</i>
9:50 a.m.	Questions and Answers
10:00 a.m.	Break
10:25 a.m.	Fischer-Tropsch Synthesis in Slurry Reactor Systems — <i>C. Satterfield, MIT</i>
10:55 a.m.	Questions and Answers
11:00 a.m.	Fe/Mn _x O _y and Precipitated Fe — <i>R. Tischer, PETC/DOE</i>
11:30 a.m.	Questions and Answers
11:35 a.m.	Assessment of Reaction Systems in Indirect Coal Liquefaction — <i>J. De-Deken, Catalytica Associates, Inc.</i>
11:55 a.m.	Questions and Answers
12:00 noon	Group Luncheon
1:00 p.m.	Liquid Phase Methanol Update — <i>J. Klosek/D. Brown, Air Products</i>
1:50 p.m.	Questions and Answers
2:00 p.m.	Bubble Column Reactor Hydrodynamics — <i>T. Leib, Mobil</i>
2:15 p.m.	Questions and Answers
2:20 p.m.	Break
2:40 p.m.	Slurry Reactor Hydrodynamic Studies — <i>Barry Brian, Air Products</i>
3:00 p.m.	Questions and Answers
3:05 p.m.	Slurry Bubble Column Dynamics — <i>D. Smith, PETC/DOE</i>
3:25 p.m.	Questions and Answers
3:30 p.m.	General Discussion
4:30 p.m.	Adjourn

General Discussion, October 12, 3:30-4:30 p.m.

Subject for Discussion: Bubble Flow Reactor Hydrodynamics

Panel Members: Mobil, APCI, and PETC

Suggested Topics:

1. Questions to previous speakers.
2. "Bottlenecks" with scale-up of bubble column reactors.
3. Future work:

scale of equipment used
hot vs. cold simulators
pressure vs. atmospheric operation
wall effects
flow regimes

Thursday, October 13, 1983

8:25 a.m.	Call to Order
8:30 a.m.	MTG — <i>R. M. Gould, Mobil</i>
9:10 a.m.	Questions and Answers
9:20 a.m.	MC/SSC Catalyst — <i>A. Frost/P. Coughlin, Union Carbide</i>
10:00 a.m.	Questions and Answers
10:10 a.m.	Break
10:30 a.m.	Syngas Conversion and Chemisorption Studies on Metal-Zeolite Catalysts — <i>V. U. S. Rao, PETC/DOE</i>
11:00 a.m.	Questions and Answers
11:05 a.m.	Spectroscopic Studies of Metal-Zeolite Catalysis Materials and Products — <i>J. Stencel, PETC/DOE</i>
11:25 a.m.	Questions and Answers
11:30 a.m.	Group Luncheon
1:00 p.m.	General Discussion — <i>W. Jones, DOE/HQ</i>
2:30 p.m.	Adjourn

General Discussion, October 13, 1:00-2:30 p.m.

W. Jones, DOE/HQ: "An Overview of the DOE Indirect Liquefaction Program"

Subject for Discussion: F-T Synthesis

Panel Members: Mobil, APCI, UCC, and PETC

Suggested Topics:

1. Reactor wax formation (mechanism)
2. Wax/catalyst separation
3. Potential for improved F-T catalyst development (One-stage vs. two-stage processes)
4. Fundamental F-T chemistry study

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