

IGT-MPR--1

INSTITUTE OF GAS TECHNOLOGY
IIT CENTER
CHICAGO, ILLINOIS 60616

PREPARATION OF A
COAL CONVERSION SYSTEMS
TECHNICAL DATA BOOK
OCR Contract No. 14-32-0001-1730
Report No. 1
November 1974

Project 8964 Status Report
for
OFFICE OF COAL RESEARCH



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I. Project Objective

The objective of this work is to provide a single, comprehensive source of data on coal conversion systems. This compilation shall be entitled The Coal Conversion Systems Technical Data Book and shall provide up-to-date data and information for the research, development, design, engineering, and construction of coal conversion processes and/or plants. Other concurrent objectives are to identify those areas where data are required and to suggest research programs that will provide the required data.

II. Work Accomplished

We received the signed contract for the project on November 4, 1974. A draft of the proposed news release covering the data book was sent to OCR.

Walter E. Lobo, P. C., was retained for consulting services on the data book project.

After considerable discussion, the following topics were assigned high priority for the first year of the data book project:

1. Liquefaction
2. Gasification
3. Fluidization
4. Combustion
 - a. Low-Temperature (Fluid Bed)
 - b. High-Temperature (MHD)
5. Coal/Char and Oil Shale Properties.

A decision was also made to consult the OCR monitors (C. F. Braun & Co. for gasification, Ralph M. Parsons Co. for liquefaction, and Gilbert Associates, Inc., for combustion) about the general content and format of the data book. They will also be approached concerning specific data that they have available that may be included in the data book. A suggested letter was drafted for OCR, which will send it to these organizations, informing them of their expected participation and cooperation with IGT in the data book project.

A large number of OCR reports have been collected and are being reviewed. We have begun a literature search in the fields of fluid-bed combustion and coal properties. Various ways of presenting gasification kinetic data have been considered. It was decided that initial investigation would be limited to consideration of char gasification, with coal gasification including devolatilization and initial rapid-rate reactions to follow at a later date.

III. Future Work

Information will be collected from various sources (OCR reports, literature, technical meetings, etc.) on the high-priority topics already mentioned.

An indexing system, which will be capable of covering all aspects of coal conversion systems, will be developed during the year for the data book.

Approved W. W. Bodle
W. W. Bodle, Director
Process Analysis

Signed A. Talwalkar
A. Talwalkar, Coordinator
Process Data Reduction

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