COAL GASIFICATION TECHNOLOGY REVIEW

SA's gas-from-coal info 'tops'

A YEAR-long study of South Africa's oil-from-coal industry has produced what American experts believe is the most exhaustive data base on gasification technology anywhere in the world today.

The research has put South Africa in a position to chart a strategy for gasification well into the next century, according to **Hugh Brown**, GM: Corporate Strategy of Industrial Machinery Supplies (IMS), which, with the National Energy Council (NEC), played a leading role in the project.

"As a result of the research studies throughout the western world by a team of eminent international authorities, we now possess a comprehensive data base which has been screened for South African user needs," says Brown.

"American authorities say that the information which has been amassed is the most comprehensive and up-to-date data in the world."

Gas-from-coal is a recognised environmentally friendly and efficient technology suitable for application in the production of chemicals, liquid and gaseous fuels, industrial and town gas, and to some extent even in power generation.

Current users of gasification technology in South Africa include Sasol, AECI, JCI, IDC, three municipalities and numerous industrial organisations, with Sasol being one of the largest and most experienced plant operators in the world.

The study - the first phase of an in-depth assessment of gasificatoin potential in South Africa - was a project managed and largely sponsored by the IMS and the NEC, with participation and contributions from Eskom, JCI, IDC, CEF, AECI,Engen and Sasol.

More than 700 pages long, the report was prepared by a team of local experts and authorities from France, Germany and the United States.

Additional input came from Britain and Japan.

The report was to be presented to participants on May 28.

The study team's basic objective was to evaluate the merits of applying existing coal gasification technologies to meet the present and future needs of southern Africa.

Specifically the objectives were three fold: to review coal gasification technologies worldwide; to assess their potential applications for local strategic and specific user needs; and, to provide recommendations and options to help in the formulation and implementation of gasification policies and programmes.

The study employed the most sophisticated risk-analysis methodology - a key element in assessing the potential of gasification technology for South African coal feedstocks, and in reaching decisions about which process should be employed.

Phase one of the investigation has established that there are a number of technically viable new-generation coal gasification processes which could be applied in South Arican power, synfuel and chemical production.

It also says, however, that economic factors will determine whether the optimisation and development of gasification technology locally is viable or not.

The study team looked at 112 gasification processes worldwide and studied data from universities, technical libraries and institutes, government energy authorities and research bodies.

South African experts contributed information in the critical field of local coal characteristics, operating experience and in editing the final report.

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(Above) Hugh Brown