8H MEETING

HELD AT

IPCL OFFICE, NEW DELHI

ON

MAY 30, 1984

8.4.2

MINUTES OF THE 8TH MEETING OF THE SCIENTIFIC ADVISORY COMMITTEE HELD ON 30th May, 1984

List of persons attended the meeting attached.

Minutes of the 7th meeting, already circulated to the members, were confirmed.

8.1. Progress Report on R & D Projects of I.P.C.L. :-

(a) I.P.C.L.

IPCL reported that the work on pilot plant for catalysts is progressing well. The technical and commercial offers for the plant are being evaluated. The project consists of one bench scale line for manufacture and evaluation of catalysts and two pilot lines (one for noble metal catalysts and one for non-noble metal catalysts). The capital cost estimated is to be Rs.7.5 crores and 50% of this would be from OIDB funds.

IPCL representative also mentioned that the finalized project scheme was sent to IOC, EIL, IIP, RRL, Hyderabad and NCL, Poona for comments. In the meeting, representatives of these organizations mentioned that they have not received this document. IPCL was requested to send the project document again to the concerned officers for their immediate comments.

The pilot plant for synthetic fibres would include a melt spinning and a wet spinning line. They are also considering inclusion of dry spinning line. The scope would also be further discussed with EIL. The technical and commercial offers are expected to be received by 15th June.

The Chairman mentioned that as these two projects are receiving 50% of OIDB funds, separate technical advisory committees may be constituted by the Department of Petroleum to discuss the R&D programme for utilisation of these facilities by various organizations interested in the area.

The pilot plant for catalysts for polyethylene is being set up jointly with EIL and the process package is complete and the cost estimate is under preparation.

The process design package for demonstration gas cracker has been prepared on the basis of ethane as feedstock and this is under review.

(b) E. I. L.

EIL representative informed the Committee that land acquisition, site grading , boundry wall construction, etc. are in hand for the R&D centre. They have also prepared process design package for dearomatising of the ATF stream

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via solvent extraction.

It was also emphasised that analytical facilities for component-wise analysis for fractions above 230°C boiling points are not available in India and therefore problems are being faced in this area. There is a need to establish such a facility.

(c) IOC

It was reported that their main area of work, so far, has been product application mainly of lubricants, engine oils etc. They propose to undertake some work on additive testing and fuel quality facility. They are also proposing to set-up a pipeline for waxy crude transportation.

Adviser(PC) mentioned that IOC, R&D was requested to prepare a programme on formulation and test marketing of synthetic lube based on PAO. It was desired that the progress on this may be reported in the next meeting.

It was suggested that a small group can look into the oligomerisation of the C_8 and C_{10} olefins.

While discussing the testing facilities for flow improvers being set up by IOC, NCL and PRI, Hyderabad, it was observed that coordination of the efforts of various organizations in the testing and approval of flow improvers may be done by the Department of Petroleum.

8.2 Classification of engineering plastics processing in Appendix I- Progress

It was reported that the necessary recommendations have been made to the Ministry of Industry who are examining this matter.

8.3 Recovery of napthalene from petroleum fractions

Based on the analysis given it was observed that napthalene potential in Assam crudes is attractive. Though the content in Bombay High crude is not as high as in the Assam crudes, the quantum of kerosene/ATF from Bombay High being large, the potential of naphthalene is also large. However, it was observed that the analysis of aromatic extract would be possible only after certain facilities are available. Therefore, it was decided that IIP could be requested to analyse the specific cut of kerosene fraction for naphthalene for the methyl naphthalenes contents.

8.4 & 8.6 Possibilities of conversion of gas to diesel oil - International status and work to be undertaken in India: Synthesis gas/methanol as raw material for chemical synthesis - Possibilities and R&D work to be undertaken:

The two routes of conversion of natural gas to higher hydrocarbons are via synthesis gas and Fischer-Trope synthesis or use of C_2 - C_4 to obtain olefins, convert them to higher hydrocarbons. NCL's representative informed that they have done some preliminary work in this area.

It was observed that with the use of natural gas for - (a) fertilizers, (b) chemicals and (c) power generation, there is not likely to be any surplus available for conversion to liquid

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fractions in the next 15 years. Adviser (Refineries) mentioned that there may be isolated fields where the quantity of gas may not justify long distance transport. It was however felt that keeping in view the alternatives available, this area is not right for a pilot plant for large scale experimental work. Some bench-scale work is justificed. There are posibilities of coordination with Coal conversion programmes.

8.5&8.7. Utilization of Gas Fractions at other locations after Maharashtra:

Alpha Olefin - Future Plans:

The Committee was informed that on the route of gas transport for fertilizer plants, the possibility of setting up of two LPG plants is being explored. The two possible locations are one in Madhypradesh and the other in U.P. Taking into account the lean gas to be supplied to fertilizers plants, the potential C_2 + C_3 availability and the ethylene and propylene yields thereof were examined.

The Committee observed that in addition to Hajira there is possibility of setting up of two gas cracker plants in the above two states. Taking into account the likely demand patterns, the suggested product choices are - (i) alpha olefins (ii) polyethylenes (iii) polypropylene or acrylonitrile, iiv) ethylene glycol and (v) vinyl acetate.

8.8. Any other business with the permission of Chair (oilfield, Chemicals, speciality chemicals for polymers, etc.)

The Chairman mentioned that there is a need to review the status of speciality chemicals for use (a) in oilfield chemicals, and (b) As polymers additives. It was decided that a note on oilfield chemicals would be prepared by Adviser(R). And a note on speciality chemicals as polymers additives by IPCL for consideration in the next meeting.

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Annexure-I

List of participants who attended the Scientific Advisory Committee meeting held on 30th May, 1984 in IPCL's office, New Delhi.

Members

1. Prof.M.M.Sharma, Chemicals Engineering, Deptt. of Chemical Technology
2. Dr.P.K.Mukhopadhyaya, Director, IOC(R&D), Faridabad.

Invitees

3. Shri M.Kurien, OIDB
4. Dr.N.C.Kothary, IPCL/OIDB
5. Shri K.C.Mehta, IOC(R&D)
6. Shri Rajan Monga, EIL, Process Deptt.
7. Dr.R.A.Mashelkar, National Chemical Laboratory, Puno.
8. Dr.D.N.Rihani, KIL (R&D)
9. Shri Sunil I.Shah, IPCL, Gujarat
10. Shri K.N.Venkatsubramanian, IPCL, Gujarat.
11. Dr.P.V.Krishna, Ministry of Chem & Fertilizers, New Delhi.

Department of Petroleum

12. Dr.K.Aghoramurthy, Adviser(PC)
13. Shri Rajendra Singh, Dir(PC)
14. Smt.Lalitha B.Singh, Project Officer.

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