if they were not caught there, Britain was receiving considerable help from the Danish authorities, who were contributing substantially to the cost of the equipment required and providing many of the facilities needed. They had also been co-operative in supplying the information about the Greenland fishery. For the same reason, at the recent meeting in Canada of the International Commission for the North-west Atlantic Fisheries, Britain joined with other nations in urging that all countries concerned should step up their investigation on salmon fisheries. After full discussion the Commission had drawn up a schedule of further information required for a proper assessment of the effect of the Greenland fishery on stocks of the Atlantic salmon and commended it to all countries concerned. There had not yet been time to find out the full extent to which the Danish authorities could co-operate, and if remedial measures proved to be necessary they could only be taken by international action. There was a similar commission for the North-east Atlantic which relied for scientific advice on the International Council for the Exploration of the Sea, which was concerned, among other things, with salmon stocks native to European countries. Lord Hughes emphasized that Britain would keep in touch with developments, but he did not think that Britain could do more on the international side than she was doing at present.

THE INSTITUTION OF GAS ENGINEERS

THE 102nd annual general meeting of the Institution of Gas Engineers was held at Solihull, near Birmingham, Warwickshire, during May 24–28, when several communications on diverse subjects of interest to members were read and discussed.

Among the papers presented* was one by Dr. N. J. Sander and Dr. W. E. Humphrey (Exploration Department, American International Oil Company, New York) entitled "Why Look for Oil and Gas in the North Sea ?") (now issued as Publication No. 677), one of the most informative, both geologically and technically, descriptions of the off-shore drilling areas in this basin yet to appear; the reasons for the venture are clearly stated, chances of success cautiously assessed, and inclusion of many maps and diagrams of simplified geological sections enables the reader to grasp without difficulty the fundamentals of North Sea geology and to assess for himself the ultimate possibilities of oil and gas recovery here.

J. W. Kerr (president, Canadian Gas Association) contributed a paper (678) on "Natural Gas in Canada", which described the phenomenal growth rate of the industry during the past seven years; while it is admitted that this rate cannot be repeated or maintained, the future growth prospects of the industry are viewed with justifiable optimism. A paper (679) on "The Application of Work Study and Associated Techniques to Plant Maintenance" was presented by H. R. Hart (Scottish Gas Board), and confirms that, on the basis of results so far achieved, work study within the field of plant maintenance and having due regard to forward developments has more than proved its worth.

C. E. Mills discussed "Some Special Features of the Recent Developments in the East Midlands Gas Board" (680), which emphasized the enormous importance to the gas industry of the grid-main system in Great Britain, with special reference to the Killingholme Grid extension. A communication (682) by F. Bell, R. O. Emmony and P. E. Gallaher (West Midlands Gas Board), entitled "Keeping up the Pressure", concerns much that is administrative in the industry, especially since the advent of gas grids, the implication being " . . . pressure on staff, contractors, and suppliers of material and equipment". P. J. Savage (North Thames Gas Board) discussed (683) "The Production of Gas from Hydrocarbons, using the O.N.I.A. Continuous Autocaloric Process". "Part and Parcel" (684) is the title of a paper by W. V. Olsson and J. K. Mitchell (West Midlands Gas Board), which dealt with appliance spare-part service.

Finally, a paper on "Progress in Management Techniques" (685), by R. J. Maher (Australian Gas Light Company, Sydney), describes his company's " . . . effort to develop the conditions under which each sub-system and its objectives are compatible with and adaptive to the total Company objectives". The tremendous potentialities of the electronic computer for efficiently handling large and involved logical systems in management in the industry are particularly stressed.

* The Institution of Gas Engineers. Publication No. 677: *Why Look for Oil and Gas in the North Sea?* By Dr. N. J. Sander and Dr. William E. Humphrey. Pp. 17. No. 678: *Natural Gas in Canada.* By James W. Kerr. Pp. 11. No. 679: *The Application of Work Study and Associated Techniques to Plant Maintenance.* By H. R. Hart. Pp. 16. No. 680. *Some Special Features of the Recent Developments in the East Midlands Gas Board.* By C. E. Mills. Pp. 21. No. 682: *Keeping up the Pressure.* By Fred Bell, R. O. Emmony and P. E. Gallaher. Pp. 17. No. 683: *The Production of Gas from Hydrocarbons, Using the O.N.I.A. Continuous Autocaloric Process.* By P. J. Savage. Pp. 17. No. 684: *Part and Parcel (An Appliance Spare-Part Service).* By W. V. Olsson and J. K. Mitchell. Pp. 16. No. 685; *Progress in Management Techniques.* By R. J. Maher. Pp. 15. (London: The Institution of Gas Engineers (1965).

INDUCTION OF ADRENAL DAMAGE AND CANCER WITH METABOLITES OF 7,12-DIMETHYLBENZ(*a*)ANTHRACENE

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A CARCINOGENIC hydrocarbon, 7,12-dimethylbenz-(*a*)anthracene (DMBA), differs from other members of this group of carcinogens in a number of ways that include:

(1) Being non-planar in the crystalline state, whereas most carcinogenic hydrocarbons are planar[1]. But the deviation from planarity of DMBA is not sufficiently great to prevent formation of donor–acceptor complexes with nitroaromatics.

(2) The ability to produce cancer in mice and rats in shorter periods of time than do other aromatic hydrocarbons.

(3) The ability to combine with DNA *in vivo* to a greater extent than do other hydrocarbons[2].

(4) The property of "invariably, selectively and totally destroying two zones of adrenal cortex of the adult rat and the induction of adrenal apoplexy"[3]. Rats can be protected against this effect and from the lethal action of