

## NEWS AND VIEWS

## Tribology for Some

THE Minister of Technology, Mr. Anthony Wedgwood Benn, has now announced the formation of what is to be known as the Committee on Tribology. This is the first sign, so far, of the attitude of the British Government to the report of a working party under Mr. Peter Jost which appeared under the imprint of the Department of Education and Science earlier this year. The committee, soon to be established, is said by the Minister of Technology to be a means of deciding "how the objectives of the report can be most effectively pursued". It is not, therefore, to be confused with the committee whose formation was recommended in the report of the working party, and whose function was supposed to be the co-ordination of research and the provision of a forum for the exchange of information. According to Mr. Benn, one of the first questions to be asked of the new committee is whether the encouragement of better lubrication practices in British industry is really dependent on the development of what the report called "Institutes of Tribology".

Since the publication of the report, the Institutes of Tribology have become the acid test which separates the tribologists from the non-believers. The original working party wanted to see the creation of "several national centres in lubrication engineering to become Institutes of Tribology". The institutes were to undertake research in tribology, provide opportunities for post-graduate education and "form and maintain a two-way bridge with industry", partly by attracting industrial men and women to research and teaching in tribology, and partly by providing "a specialist tribological service to industry on an *ad hoc* as well as a regular basis". Institutes were to be placed near academic institutions for the sake of the education, and near industrial centres so as to function effectively as consultants.

This proposal has fallen foul of critics for several different reasons. Some, this journal among them (*Nature*, 210, 338; 1966), have argued that the proposals are needlessly grandiose. Others have opposed them because they seem to cut across the legitimate interests of established institutions, and in particular because they would be certain to duplicate work that is being done, or which should be done, by existing organizations for industrial research. The Department of Education and Science has remained somewhat unenthusiastic about the proposals in the report, though there is said to have been a welcome for them by some members of the University Grants Committee. The Ministry of Technology has been hesitant, although there is reason to believe that an announcement on tribology was at one stage to have been made by the previous Minister of Technology, Mr. Frank Cousins, on the eve of his resignation from that post. From this point of view, the decision to create a new committee should be a welcome opportunity to resolve the differences between the tribologists and their critics. If the outcome should be a demonstration of how engineering departments in universities can more effectively help industry to some of the benefits, often exaggerated, of better tribology, nobody will complain. If the result is merely a better understanding of what the working

party on tribology was really getting at, even that will be something gained.

## ELDO under Scrutiny

THE view that the European Launcher Development Organization (ELDO) has not, so far, been "value for money" for the British Government has been made public by a sub-committee of the Estimates Committee of the House of Commons (*Second Report from the Estimates Committee, 1966-67, The European Space Launcher Development Organization, H.M.S.O., 19s.*). The report stands out among such documents for its topicality; it carries the history of the negotiations between the British Government and its European partners up to the meeting in Paris on July 7 at which a re-allocation of the costs of ELDO among the participants was finally agreed. Some of the verbatim evidence in the report is no older than a month.

For all the reputation of the Estimates Committee as a counter of candle ends, the enquiry on ELDO seems to have been concerned as much with the future as the past. It is made clear, however—possibly for the first time—that the French proposal at the beginning of 1965 for the virtual replacement of the original ELDO programme by a much more ambitious venture was, at the time, as much of a shock as the circulation by the British Government of a memorandum expressing serious doubts about ELDO in February 1966 and its public declaration to that effect at the beginning of June. The sub-committee, by its questioning of officials from the Foreign Office, did very little to define for public purposes how the Government's doubts could have been resolved by the decision that the scale of its contribution to future costs should be 27 per cent and not 38 per cent, although it is also now written into the agreements on ELDO that future increases of cost will not automatically be passed on to unconsenting partners.

On the value of the ELDO programme, the committee was concerned to establish that the present ELDO PAS programme will yield by 1970 a launching vehicle capable of putting into a geostationary orbit satellites of 150 kg or so, which will carry some 2,500 voice channels of communication. It was common ground among the witnesses that such satellites will not be capable of direct television broadcasting, but there was disagreement about the extent to which they would be able to form part of a world-wide satellite network by the early seventies. ELDO was supported with scant enthusiasm by the representatives of the British Post Office, who held firmly to the view that the United Kingdom could secure her interests in the future of telecommunications by negotiations within the international organizations for the time being responsible for the development of the satellite network. The same exchanges disclosed that British companies had been invited to tender for the six satellites now being developed for INTELSTAT, and had not felt able to put in a bid.

The sub-committee's general conclusion is that the decisions just reached on ELDO "are not a solution to the real problem", and that there is a need immediately to take decisions about the long-term future of the organization, with adequate guarantees of long-term finance. It promises that it will soon turn its attention to the general question of space research in Britain, and its present report is heavy with hints