

**Death from the Skies:**

a Study of Gas and Microbial Warfare. By Heinz Liepmann (with the scientific assistance of Dr. H. C. R. Simons.) Translated from the German by Eden and Cedar Paul. Pp. 286. (London: Martin Secker and Warburg, Ltd., 1937.) 6s. net.

THE author of this sensational book claims to have received information from certain authoritative sources which it would be inexpedient for him to acknowledge; but there seems to be nothing new in his disclosures, and all the probable war gases which he lists as "pre-eminently suitable" can be found in any of the books that have been published on this subject. He believes that "hundreds of millions" will perish from gas in the war that is to come. "Just a minute or two of a hideous struggle for air, and then death—lucky, perhaps, if it is over so quickly. In former days men condemned to death were at least given time for a prayer. Not these, not these. They groan, they scream, they suffocate, they die."

We hear again of the same old gas bomb which, falling in Piccadilly Circus, would destroy all life between Regent's Park and the Thames; and amongst the "authorities" on whom he depends he even includes an entry in a record of the German Patent Office. He comes to the conclusion "that there is no protection against poison gas. Anyone who says such protection is possible is a liar." Similarly, there is no defence against bacteria; and, should war break out within the next few months, Germany will wage bacterial warfare, and we may expect glass flasks filled with cultures and contaminated rats dropped from aircraft by means of small parachutes.

The author is mistaken in saying that the British General Headquarters undertook costly chemical experiments before the outbreak of the Great War in the expectation that poison gas would be used. He is also misinformed in supposing that no known gas mask can protect against blue cross gas; and quite wrong in describing the Chemical Warfare Research Committee as a joint Allied organization, and in stating that (the British) General Thuillier succeeded (the French) General Curmer as head of the French State Commission for Gas Service. His description of the present condition of Germany is quite the most interesting part of the book—"a poverty stricken and dangerous land, a focus of unrest for Europe, in imminent danger of exploding—the explosion being prevented only by a reign of terror unexampled in history". Hitler, he thinks, will inevitably embark on expansionist adventures, and a decisive struggle between Britain and Germany must occur.

C. H. F.

**The Journal of the Institute of Metals**

Vol. 59. Edited by G. Shaw Scott. Pp. 323+22 plates. (London: Institute of Metals, 1936.) 31s. 6d.

IN September last year, the Institute of Metals held its autumn meeting in Paris, and this volume includes the sixteen papers presented on that occasion, together with the Autumn Lecture on "The Scientific Organisation of Works" by Prof. Pierre Chevenard, scientific director of the Société de Commentry,

Fourchambault et Decazeville. This lecture is a remarkable and convincing account of the successful application of scientific methods throughout a large industrial concern.

A considerable proportion of the papers published in this volume deal with the alloys of aluminium; M. Gauthier describes the effect on the conductivity of super-purity aluminium of additions of those elements which may occur as impurities in commercial aluminium; Mr. N. D. Pullen presents an account of a new treatment for the production of reflecting surfaces on aluminium, while Prof. Portevin and Dr. Bastien treat the property of forgeability in a fundamental manner.

A lengthy paper by Atkinson and Raper provides up-to-date metallurgical information on the six metals of the platinum group, while Northcott discusses veining and sub-boundary structures in metals. Other papers deal with the creep of tin and tin alloys, fluxes for use in soldering, and the constitution of the alloys of cadmium and tin and of indium and lead.

**Statistical Year Book, 1937, of the International Tin Research and Development Council**

Pp. 206. (London: International Tin Research and Development Council, 1937.) 6s.

THE International Tin Research and Development Council has carried out a useful task in issuing a comprehensive statistical year book, which deals not only with production and trade but also with the varied aspects of consumption. The use of tin in the automobile industry on one hand (8 per cent of the total world consumption) and in the canning industry on the other (50 per cent of the total) are indications of the widespread importance of this key metal. In spite of this, the production is very localized and about 85 per cent of the output comes now under the control scheme. Of the total world output in 1936 of 179,600 long tons, Malaya produced 66,806; the Netherlands East Indies 31,546; Siam 12,678; Bolivia 24,074; Nigeria 9,529 and China 10,664 tons. The greatest consumer, the United States, had a home production (including Alaska) of 87 tons, and the great European users have similarly tiny supplies only

L. D. S.

**The Technology of Aluminium and its Light Alloys**

By Prof. Dr. Alfred von Zeerleder. Translated from the second German edition into English by A. J. Field. Pp. x+301. (Amsterdam: Nordemann Publishing Co.; London: Crosby Lockwood and Son, Ltd., 1936.) 21s. net.

THE original German edition of this book was published in 1934, and a second edition was found necessary in less than twelve months. From this second edition Mr. Field has prepared the present translation, and has also brought the text rather more up to date. The book gives in condensed form the essentials of the working of aluminium and its alloys, the object being to bring home the merits and possibilities of aluminium to a wide circle of users and potential users. This purpose it fulfils admirably.