suggestion was practicable. Ten years later the director of research of the Air Ministry asked Robert Watson-Watt what he thought about the use of death rays for air defense. Watson-Watt, who had directed the study of radio noise and radio storm tracking since World War I, replied that it would be difficult to obtain damaging radiation effects at a distance but that it would be quite practical to detect and to track aircraft by means of radio pulses. The government gave immediate support. Within a month the concept had been tested, and within a year the first coastal warning stations were being designed. In the short 4 years before the start of World War II, early warning, ground control of interceptors, field army defense, air-to-ship, ship-to-ship, and air intercept radars were designed, tested, and put into production. From this beginning came the many other radar systems, radio beacons, and radio navigation systems which played such a vital role in the last war.

The Pulse of Radar is this story and the autobiography of Sir Robert. The two are intimately related. This is primarily the history of the British program, since that is the story the author knows personally and since the development of radar in the United States has been adequately glorified in other works. The British program is the really exciting one.

This volume has value not only as stimulating technical history but, perhaps even more, because of the light it sheds on the science-government-military relationships which made possible such dramatic progress. Even though the problems of military science are now much more complicated and the incentive may not be as great as it was then, still, much could be done to reduce the lead time for military research and development. Much can still be learned from the experiences described in this book.

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Les problèmes aux limites de la physique mathématique. Introduction à leur étude générale. H. G. Garnir. Birkhäuser, Basel, Switzerland, 1958. 234 pp. Illus. F. 29.

The simple Dirichlet problem is that of finding the temperature distribution in a solid when the temperature at the surface is prescribed; the Neumann problem differs only in that the heat flow across the surface, rather than the temperature itself, is prescribed. These problems are mathematically equivalent to those of finding a potential distribution when the potential at the surface is prescribed in the one case, the potential drop across the surface in the other. Either problem leads to that of finding a function u which satisfies

$$\partial^2 u/\partial x^2 + \partial^2 u/\partial y^2 + \partial^2 u/\partial z^2 = 0$$

throughout the region while at the boundary either the value of u itself or that of its normal derivative is prescribed. By including additional terms involving the function itself, and perhaps its first and second derivatives with respect to time, one obtains the mathematical conditions satisfied by the concentration of a solute diffusing through a solvent, the flux of neutrons in a nuclear reactor, the amplitudes of propagated waves, the displacement of an elastic medium subject to small perturbations—to mention only a few of the concrete applications. A powerful tool for the construction and study of the solutions of these problems is provided by the formation of a Green's function, which amounts to forming certain special elementary solutions which, when properly compounded, provide the solution actually required.

The monograph under discussion generalizes the problem to n dimensions and phrases the boundary conditions in more general terms, permitting, in particular, the Dirichlet condition to hold in certain areas and the Neumann condition to hold elsewhere along the boundary. The treatment is strictly modern, being phrased in terms of Hilbert spaces and utilizing Schwartz distributions. However, the necessary theory is developed at the outset, only a background in the theory of real and of complex variables, including some acquaintance with Fourier and Laplace transforms, being presupposed.

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Economics for the Mineral Engineer. Edmund J. Pryor. Pergamon, New York, 1958. 254 pp. Illus. $6.

Traditionally, the mineral beneficiation engineer has concerned himself with research and plant design. The problems of economics and management in the mining industry have been handled generally by those connected with development and ore production. Because of the ever-growing importance of ore concentration, this relationship is changing. It is essential that the mineral dresser of the future be well informed on the impact of costs, markets, and industrial relations.

There have been numerous books on mineral economics and mine valuation, all directed toward the geologist and the mining engineer. This is the first written specifically for the beneficiation engineer, or the mineral engineer, as he is called throughout much of the British Empire. Such a treatise is long overdue and should be of value to the teacher and student of ore treatment. The book is designed for the advanced student or the young engineer-supervisor aspiring to management, rather than for the undergraduate. The author is a lecturer at the Royal School of Mines, with managerial and consulting experience. His use of the "King's English" is exceptional—a definite advantage in educating our engineers to write well.

The opening chapters present a concise exposition on the prospecting and sampling of ore deposits. The coverage of accounting as it relates to economics is based on British methods and symbols, and this tends to confuse the American student somewhat. However, the presentation of specific data on mill records and mill construction are of particular value to the neophyte. A section on "new plants" offers practical and sound advice.

The real value of the book lies not so much in specifics as in the philosophies it expounds. This is particularly true in the coverage given management, labor relations, and professional ethics. Here are points too seldom presented to the engineer in his highly technical training. The enlightened view in personnel problems and the development of social conscience, particularly in foreign operations, are stressed as necessities.

Since the book touches briefly on many subjects and lists an ample number of references, it should stimulate additional reading on mineral economics. Some chapter revision seems warranted. Certainly "Incentive bonus" and "Hiring and firing" would be better under "Management" than under "Mill records." The "Glossary" is a definite contribution, containing definitions often hard to find.

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Introduction à l'étude des variétés kählériennes. Publications de l'Institut de Mathématique de l'Université de Nancago, VI. André Weil. Hermann, Paris, 1958 (order from Pierre Berès Inc., New York). 175 pp.

A surface, in Euclidean space, can be examined from (at least) two points of view. The Euclidean concept of distance induces, on the surface, a metric which has found its historical expression, in terms of local coordinates, by means of a quadratic differential form for arc length. On the other hand, Euclidean space can be embedded in complex projective space so that Euclidean geometry