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A RATIONAL EXAMINATION OF STREAM POLLUTION ABATEMENT

By RICHARD D. HOAK
MELLON INSTITUTE OF INDUSTRIAL RESEARCH, PITTSBURGH, PA.

Stream pollution, from all sources combined, is an extremely complex problem which has expanded gradually, largely through non-recognition of its effects or indifference to them. If it is borne in mind that the amount of pollutive substances discharged to streams has increased almost imperceptibly, in general, over many years, it is not difficult to understand how such pollution has become widespread before there has been a realization of its significance. As pollution abatement involves many conflicting factors it is desirable, from time to time, to re-examine the subject and consider its fundamentals. Numerous technical reports, treatises and results of surveys are in existence, couched in the language of the biologist, the chemist and the engineer. In this article an attempt will be made to discuss some pertinent considerations in the familiar words of the layman.

STREAM FUNCTION

The geological plan of the earth offered streams to carry away the waste products of natural processes. In conducting excess water from the land to the oceans, streams transport such a quantity of mineral and organic wastes that many watercourses support but little aquatic life and their waters are unsuitable for domestic or manufacturing uses without extensive treatment. Streams vary widely from basin to basin in their normal burden of silt, dissolved substances, organic matter and microorganisms, and the restoration of streams to their natural state by the elimina-