

Glover reports that the above-described process is applicable to mine drainage which contains more than 10-20 ppm of dissolved iron and a total acidity of more than 25 ppm. Temperature limits are 0-35 C. As far as is known the process has never been evaluated on a large scale. No full-scale biochemical processes have been built for treating mine water.

I. Demineralization Processes:--The processes generally classed as demineralization process are the many saline water conversion process for producing potable water.(53) Two of the processes have been evaluated experimentally as mine water treatment processes. Westinghouse Electric Corporation, 1965 (54) has evaluated the application of flash distillation to mine water treatment. General Dynamics Corporation, 1966 (55) conducted a 20-day evaluation of the reverse osmosis process for the Office of Saline Water.

Details of each of the various processes will not be presented herein, however, all of the demineralization processes have two general characteristics in common and these will be discussed briefly.

All of the saline water conversion processes provide as a product potable water, that is water of such quality that it can be used for drinking water. More generally, these processes produce fresh water from salt or brackish water.(53) Salt or sea water is defined as water containing approximately 35,000 ppm of dissolved solids. Brackish water is defined as water ranging from 1,000 ppm to 35,000 ppm of dissolved solids. Fresh water contains less than 1,000 ppm of dissolved solids. It is interesting to note that the Westinghouse and General Dynamics tests were conducted on water which would be classed as brackish by the above definitions. Many mine waters are now being used as drinking water supplies as discharged with normal water treatment practice applied. These water supplies are generally "polluted" acid mine water.