

of heat energy, or about 130 million horsepower for an hour. Thus hydrogen as nuclear fuel would be about 10 times as good, weight for weight, as uranium. There are possible ways in which an explosive reaction of this type can be produced by utilizing the very high temperature and pressure developed in the explosion of atomic bomb, but so far there is no clue to a method for bringing about the reaction in a controllable way. However, it is interesting to speculate on the possibility that nuclear scientists may discover how to do this in the future.

There is enough hydrogen in the sea, if it were all converted into helium, to raise the temperature of the whole earth to at least one million degrees centigrade, i.e., over hundred times the temperature of the surface of the sun. Fortunately for us the possibility of bringing about such an explosion can be ruled out, if for no other reason than that if it were possible, it would have happened in the past history of the earth. However, if we accept

as the desirable power level for civilization that every individual should utilize, on the average, 1 kilowatt of power continuously, we can calculate that 3,000 million inhabitants of the earth could be supplied with power from the hydrogen of the sea for 1,000 million, million years, or for about a million times the age of the earth itself. Thus, if this remote possibility is realized, mankind would have no need to look elsewhere than to the sea for all the power they can conceivably use in the lifetime of the solar system.

In conclusion, it must be emphasised that industrial power from uranium is on the doorstep and will almost certainly be used successfully, while power from hydrogen is only a remote possibility in the light of existing knowledge. In any case, the probability is small that any nuclear power will be available for useful purposes unless the problems of war can be solved, and that is a question for all mankind and not for the scientist alone to solve.

#### ROCKEFELLER DONATION TO THE M.I.T.\*

THE Massachusetts Institute of Technology recently announced the receipt of a gift of \$ 1,000,000 from John D. Rockefeller Jr. to be used for "buttressing of the Institute's financial stability and independence as a private institution".

The gift was announced by Marshall B. Dalton, Chairman of the Institute's Development Program, at a meeting of more than 200 alumni members of the National Committee on Financing Development. The Committee was established in 1948 to "fund M.I.T.'s independence" through a \$ 20,000,000 development program. Mr. Dalton said that Mr. Rockefeller's gift increased to \$ 12,162,309 the total raised to date.

Mr. Rockefeller wrote to Dr. James R. Killian Jr., President of the Institute, that "because of the Institute's outstanding position of leadership in the field of science, the high order of service rendered by it, as well as the promise of future achievement which it gives, I am glad to have a part in the effort to broaden its educational program and strengthen its financial condition."

He expressed the hope that the Institute would continue to expand its "strategic service" to all interested in the advancement of science.

\* With acknowledgments to *World in Brief News Service*.

#### INTERNATIONAL CONFERENCE ON ATOMIC ENERGY

TWO hundred nuclear experts representing most of the Western nations and the Commonwealth countries are expected to attend the first big international conference on atomic energy to be held in Britain in September.

The conference is being organised by the British Atomic Energy Research Establishment. Most of the meetings will take place at Oxford

University and the conference will last one week.

Discussions will be divided into two parts. The first section will be mainly concerned with the use of high energy accelerators for experiments in nuclear physics. The second part will deal with work at lower energy levels and include discussions on the employment of atomic piles for research and experiments,