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UA May Have Secret To Cheap Desalting

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in meteorology but is now a full-time member of the institute staff.

The solar still now being tested has a concrete bay to heat the water 150 feet long and 9 feet 8 inches wide.

The layer of plastic on top traps the heat that comes into the water from the sun. And the water may enter the evaporator at 160 degree Fahrenheit.

The evaporator is a foot-square sheet metal duct running the length of the bay.

THE HOT WATER enters the evaporator to a depth of 6 inches. A fan at one end blows air over the water.

This fresh air provides a space into which the molecules of water may jump.

This is a much more efficent way of using up the energy which has come into the water from the sun than the conventional solar still in which the water simply distills on a glass tent and drains off.

At the other end of the evaporator, the air now full of vapor passes into the condenser and the salt water goes in the bay to be used again.

The condenser is a 50-foot long duct 8½ inches square. It is placed in water cooled by a refrigeration plant to about 60 degrees to simulate sea water which would be used for the same purpose in a commercial plant.

The condenser works in much the same way as dew is deposited on the ground at night.

Entering the chamber at perhaps 160 degrees, the air is cooled in the condenser to about 60 degrees.

Since the amount of water that air can hold is dependent on the temperature, the air is forced to give up some of its cargo. This is deposited on the sides of the condenser in a frosting and drains off.

"WE ARE PRODUCING about 60 to 90 gallons of water a day now," Hodges said. "But I think with refinements in the system we can produce 200 gallons."

Much more water would be produced in the summer than in the winter because the water would be heated much hotter and would be more inclined to evaporate.

In any system of this kind, one of the main problems is to use the energy of the sun as efficiently as possible.

Hodges estimates the cost of his plant at roughly 25 cents a square foot as compared with perhaps $2 in more conventional systems now being tested.

"So far, the system is working according to the theoretical estimates and we have run into no serious problems," Hodges said.

He has, of course, had to contend with the bugs that develop in any new device.

FINS WERE PLACED in the condenser to make the air vapor bounce around more and therefore cool faster. There was a problem of air under the plastic cover in the bay which Walter Grace, an engineer, now working with Hodges, solved.

And Hodges plans to use a stronger blower to produce a faster stream of air in the evaporator — and therefore more water.

Hodges got his idea last spring while working with Dr. William Sellers of the institute staff on an instrument to measure the water vapor coming out of the ground.

THE SYSTEM, in this case, used the principle of moving air to pick up the water molecules.

Then he became interested in salt water conversion after attending a lecture on desert survival.

"I wondered how I would get fresh water if I were on a raft at sea," Hodges said.

So he built a small model which successfully distilled fresh water and then experimented with the rooftop model which was 20 feet long. Again the results were very successful.

The young scientist was born in Texas but his family moved to Phoenix when he reached the third grade in school. His father is race horse trainer and owner.

"I WAS NO BOY scientist," Hodges said, looking back on his high school days.

At the university here, he tried electrical engineering for a year, but decided he didn't like it. He then moved over to math.

A course under Dr. James E. McDonald in the UA Institute of Atmospheric Physics interested him in meteorology.

And after attending a summer workshop in meteorology at the University of Chicago, he decided to do graduate work in that field.

Hodges is married and his wife is an art teacher at Pueblo High School.

In addition to Grace, who is now studying for a degree in meteorology, two undergraduates are working on the project—Bruce Crawfold and Charles Davis.

Information Unit Further Centralized

Another step was taken this week toward centralization of four community organizations in the Greater Tucson Information Center at 420 W. Congress St.

Russel L. Soden, business manager of the new center, said today that the Convention Promotion Department has been moved to the Sunshine Club Office at 1240 Miracle Mile. At the same time, the Accounting and Inquiry Department of the Sunshine Climate Club were moved to the building at 420 W. Congress St.

The Convention Bureau is being transferred to the Sunshine Climate Club, which will be known as the Sunshine Climate Club Visitors and Convention Bureau. The new combined bureau will continue to operate at 1240 Miracle Mile until construction is completed at the Congress Street address.

New construction and modification of the Congress Street building is progressing according to schedule which calls for completion by early February.

Arthur Brown is architect for the building which is being built by the W. F. Conely Construction Co.