

TECHNOLOGY

Nuclear Power Plant Operating in Antarctica

See Front Cover

► A NUCLEAR POWER plant near the bottom of the world has begun delivering electricity to the U.S. Naval Air Facility at McMurdo Sound, principal support base for U.S. scientific activities in the Antarctic.

A delayed radio message from the now-isolated continent reported that the plant, seen on this week's front cover, was plugged into the base power system on July 9 (July 10 Antarctic time). The message was relayed by the Navy in Washington to engineers at the Martin Company, where the plant was built under contract with the Atomic Energy Commission.

The plant was prefabricated and shipped to Antarctica in sections by a Navy transport, then assembled in only 80 days. On March 4, the reactor developed a self-sustaining chain reaction for the first time, and routine checks have been going on since then.

The 1,500 kilowatts of power available from the nuclear plant represent five times as much electrical power as was previously being supplied to the McMurdo Sound Naval Air Facility by diesel generators.

Next season the Navy plans to divert some steam to a seawater distillation plant. In spite of the fact that the Antarctic continent is blanketed by some 7 million cubic miles of ice, water for drinking and bathing is scarce and sharply rationed.

A major advantage in the use of nuclear power lies in the fact that a single fuel loading will provide as much energy as millions of gallons of hard-to-ship diesel oil.

• Science News Letter, 82:63 July 28, 1962

Do You Know?

The best preventive *medicine* against hardening of the arteries is a lifetime of physical activity, according to one scientist.

Under certain cultural conditions the pink *bollworm*, a serious pest of cotton, will infest okra.

The natural *fluoride* level of human teeth varies from about 20 to 500 parts per million.

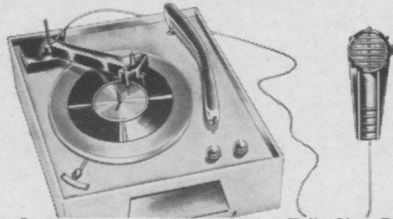
Carbides of tantalum, hafnium and zirconium have some of the highest known *melting* points, approaching 4,000 degrees centigrade or 7,232 degrees Fahrenheit.

The disaccharides, sucrose, maltose and lactose, are split by *enzymes* which are imbedded in the surface membrane or "brush border" of the epithelial cells that line the inner surface of the intestines.

A new instrument, the *bathyconductograph*, can measure from a moving ship the electrical conductivity of sea water at various depths.

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