

Technology

MARINE TECHNOLOGY

Underwater Laser Developed

A million-watt laser designed to penetrate sea water for several hundred feet has been developed for the U. S. Navy's Underwater Sound Laboratory.

The laser, a rapidly pulsed device, will be used to study the propagation characteristics of laser light in sea water. Previous instruments for study of attenuation of light in water have been confined to light paths about one meter long.

The system was built by the Korad Corp., Santa Monica, Calif., a division of the Union Carbide Corp.

NUCLEAR PHYSICS

Intense Neutron Generator

To conduct research in advanced nuclear power generation, as well as basic physics research, Canada will build an Intense Neutron Generator.

Site of the new facility is still to be determined; it is considered as large a scientific plum for some Canadian location as the 200-Bev accelerator was for Weston, Ill.

The generator will cost between \$150 and \$200 million, making it the largest single scientific instrument in Canada. Nuclear reactors now operating, although having a plentiful supply of neutrons, cannot be made to yield a beam of these nuclear particles as intense as scientists need to test their effects on structural materials, for instance.

A sufficiently intense beam will be generated in the new facility when a stream of protons from its accelerator hits a target, stripping the particles of their positive electrical charge and changing them into neutrons.

A report recommending construction of ING will be made in June by the newly formed Science Council of Canada, according to Dr. Roger Gaudry, its vice chairman.

HIGH VOLTAGE ENGINEERING

New Testing Laboratory

One of the largest laboratories in the world for testing high voltage electric transmission equipment will be constructed in Canada.

Most of Canada's electricity comes from water, rather than steam generating plants as in the United States. The Canadian testing laboratory will cost \$28 million, with operating expenses estimated at \$4.5 million a year. The facility, however, is expected to earn some \$2 million a year from testing high voltage devices for North American companies that do not have their own laboratories and must now send their equipment overseas—chiefly to Western Europe—to be checked.

Lionel Boulet, director of the new Research Institute of Hydro-Quebec, says the laboratory is badly needed because Canada's power requirements are doubling every 10 years.

It will have facilities for checking the ability of circuit breakers, for instance, not to break down at power levels as high as 17 billion watts.

Social Sciences

PSYCHIATRY

Survivors Still Suffer from Nazi Camps

Nazi concentration camps left their few survivors with permanent psychological damage and a greatly reduced ability to adapt to new and happier conditions.

Dr. Peter F. Ostwald, professor of psychiatry at the University of California Medical Center in San Francisco, concludes from an evaluation of 55 victims that many are still emotionally damaged and sick 20 years after their liberation, although they appear to have made a successful adjustment. They are given to compulsive reminiscing about the horrors of the past, he told the American Psychiatric Association meeting in Detroit.

In a second paper on the subject, Dr. Paul Chodoff of George Washington University said the depression, guilt and excessive rumination common to survivors cannot be fully explained in usual psychiatric terms.

Normally the depression and inability to forget lost relatives might be explained as guilt compensation for death wishes against loved ones who were later actually murdered by the Nazis. But a larger explanation is needed, said Dr. Chodoff, who has examined 107 cases. This preoccupation with the dead suggests a "desperate attempt" to rescue relatives from the "limbo of insignificance." Survivors have been unable to resolve their guilt through the usual mourning because they can find no explanation, no reason for the disaster, he said.

PSYCHIATRY

Obscene Callers Seldom Act

Men who make obscene telephone calls are not likely to follow-up with physical assault. The obscene caller is related psychologically to the exhibitionists, but he is more frightened of direct action, says Dr. Raoul P. Nadler of New York University.

Dr. Nadler told the annual meeting of the American Psychiatric Association that annoyance calls in New York increased 10 percent in 1966 over 1965. Some 16,000 obscene calls were reported to the New York business office of the Bell Telephone Co. in the nine months from April to December 1966.

There is evidence, said Dr. Nadler, that the obscene caller is both more aggressive and more scared than other men with sexual perversions. "He acts out his perversion at a greater distance, but more actively."

Dr. Nadler said the telephone call is aimed at inspiring a woman's awe or fright for the purpose of bolstering a sense of potency. The caller usually resorts to telephoning when his self-esteem is particularly low and he is intolerably anxious. He needs a rapid infusion of assurance from women.

The best course of action for a woman receiving such a call is to hang up and give no response whatsoever. But she need not be afraid of the unusual amount of rage characteristic of lewd phone calls since the caller is frightened by his own anger and potential for destructiveness.

Dr. Nadler cited three case studies of such telephone callers. He said he could trace the perversion to no distinct family relationship. Though all three fathers in the cases he studied were weak, that is not always the case. There is no simple rule of thumb either for treatment or prevention, said Dr. Nadler.