

### NRC SCHOLARSHIPS FOR 1964-65

The National Research Council of Canada has granted 971 scholarships for 1964-65, with a total value of \$2,357,400.

Eight hundred and ninety of these scholarships are for graduate work at Canadian universities. They include 319 bursaries worth \$2,000 each and 571 studentships worth \$2,400 each.

Awards for study outside Canada include 28 special scholarships worth \$3,000 each. Sixteen of these are to be held in Britain and 12 in the United States.

### OVERSEAS FELLOWSHIPS

Fifty-three postdoctorate overseas fellowships, valued at \$5,000 for married and \$4,000 for single fellows, have been granted for work in the following countries: 28 in Britain, 13 in France, three each in Germany and Switzerland, two in Sweden, and one each in Australia, Brazil, Hong Kong, and Israel.

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### PROGRESS AT DOUGLAS POINT

Construction of the nuclear power station at Douglas Point, Ontario, is in its final phase following the recent installation of major components such as the CANDU reactor vessel, or "calandria". Most of the equipment has been delivered to the plant and a construction force of 350 men is working in the reactor, service and turbine buildings.

The station, which will deliver 20,000 kilowatts of electricity to the Ontario Hydro system, will be completed at the end of this year and will go into service in 1965. The plant is being built by Atomic Energy of Canada Limited on a site owned by Ontario Hydro. It will be operated for AECL by Ontario Hydro, which will buy the power at rates comparable with those which Hydro pays for power from other utilities. When the plant has established itself as a dependable generating unit, Ontario Hydro will purchase it.

Douglas Point was designed jointly by AECL Power Projects, Toronto, and the Engineering Department of Ontario Hydro. AECL staff, with the help of many contractors, designed the CANDU reactor, the boilers, the fuelling machines, the control system, and all related auxiliaries and services. Ontario Hydro staff designed the buildings, the turbine-generator plant and the electrical systems. The maximum total engineering staff working on Douglas Point was about 500.

### END OF A LONG JOURNEY

At the end of last January, the 60 ton calandria travelled the final 400 feet of a long journey. Built

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in the Montreal shops of Dominion Bridge Company Limited, the calandria was carried last summer about 800 miles on a barge through the St. Lawrence River and the Great Lakes to the harbour at Kincardine, on the eastern shore of Lake Huron.

At the site, the calandria was placed in a temporary building where it was tested to ensure that no leaks had developed. When the vault in the reactor building was completed, the reactor was brought in on a carriage mounted on rails and then hoisted into position. The calandria is suspended from the vault roof by eight Invar rods which are cooled by heavy water. (Invar is a nickel-iron alloy that expands very little when heated.)

The calandria is about 17 feet long and 20 feet in diameter and is made of stainless steel. The 306 horizontal tubes between the ends of the vessel are made of Zircaloy-2, a zirconium-tin alloy that absorbs relatively few neutrons. In these calandria tubes will be inserted Zircaloy-2 pressure tubes that will hold about 61.5 tons of uranium dioxide fuel. The aluminum reactor vessel in the 20,000-kilowatt Nuclear Power Demonstration Station (NPD) has 132 calandria tubes, and the pressure tubes hold about 20 tons of uranium dioxide fuel.

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### CANADA'S MANY SOLITUDES

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mutual homeland. We must impress upon newcomers the fact that they must not bring to Canada old prejudices and quarrels, that they must not discriminate against other nationalities. Whatever the wrongs suffered by their peoples at the hands of others in by-gone days, they should be prepared to forget such quarrels and start life anew in Canada. Racial or former political animosities have no place in the life of this nation and it is the duty of Canadians to make newcomers aware of this feeling.

Finally, if parents and teachers alike are careful never to cast aspersions on nations or races, children will not acquire the prejudices which lead to discrimination. Many a careless word or unkind jest on the part of adults has been translated by children into persecution of their school associates. One should also support these individuals who are trying to eliminate stereotypes of people from our cultural expressions. No one nationality or race has all the virtues - or all the vices.

Only a few weeks ago "Brotherhood Week" was celebrated in this country. During that period many expressions of esteem were voiced. I can only hope that the goodwill which was expressed at that time will be translated into positive action in our national life.