

This reactor, moderated by heavy water and cooled by organic liquid, is reported to be the most advanced in the world. The 137-megawatt KANUPP station in Pakistan was designed and is being built by CGE, and the company has been bidding for nuclear-power stations in Finland and Argentina.

AECL TEAM

For its part, Atomic Energy of Canada has a large and experienced team of nuclear designers in its Power Projects group at Sheridan Park, near Toronto. Power Projects designed and managed the construction of the 200-megawatt Douglas Point nuclear power station now successfully in operation and incorporated into the Ontario Hydro grid. The group is designing the 250-megawatt prototype nuclear power station which the company is building near Gentilly, Quebec, for incorporation into the Hydro-Quebec system. Power Projects is providing nuclear engineering services to the Indian Department of Atomic Energy for the two 200-megawatt units under construction in India's Rajasthan Province. They are also designing the nuclear portion of the four-unit 2,160-megawatt station being built by Ontario Hydro near Pickering.

CGE proposed and AECL agreed that it would be preferable if Canada's two nuclear-design groups were integrated to form one powerful team to undertake the design work required for the expanding nuclear power programme in Canada. This would also enable Canada to have one organization rather than two in the export market. In the past, AECL provided design services to overseas clients seeking nuclear consulting engineering assistance, while CGE has offered design and supply services. By combining the two, Canada will have greater strength to meet the competition from the mammoth organizations of other countries.

CAR-CORROSION TESTS

Alberta motorists seem to be among the most favoured in Canada when it comes to the effects of atmospheric corrosion on automobiles. The same seems true of the corrosive effects of salt applied in winter to roads and highways.

The Alberta Department of Highways co-operated with its Ontario counterpart in various tests to gauge the effects of corrosion on automobiles in various parts of Canada. One group of vehicles was tested at Edmonton, another at Fredericton, and a third at Halifax. In Ontario, vehicles were tested at Toronto, Ottawa, Chatham, North Bay and Cochrane.

The testing covered 19 months, including two winters and one summer. To determine the extent of corrosion of auto-bodies by salt applied to roads, the vehicles were fitted with plates of auto-body steel mounted under the rear fenders above the wheels. Some of the plates were smooth metal surface and others were creviced.

The results showed that the test plates on Nova Scotia vehicles suffered most, while those in the Edmonton area suffered least. The wind-blown salt

spray from the Atlantic, which falls on every part of the Maritime province, is blamed for the faster rate of corrosion.

The results of the tests were expressed in relative numbers which have no special meaning other than their value as comparative figures. For the smooth plates, Edmonton had a corrosion rate of 8. This compared to 10 at Chatham, 10 at Ottawa, 12 at Cochrane, 16 at Fredericton, 18 at North Bay, 23 at Toronto, and total destruction at Halifax. The results on the creviced plates were just as varied: Edmonton 9, Fredericton 14, Cochrane 15, Ottawa 17, Chatham 18, Toronto 30 and Halifax, again, total destruction.

Other groups of plates of auto-body steel were exposed only to atmospheric corrosion, free of the effects of added salt and constant splashing. The resulting loss of material owing to corrosion, measured in milligrams a square centimeter, ranged from 12.5 at Edmonton to 22 at Cochrane, 25 at North Bay, 43 at Chatham, 51 at Toronto, 40 at Ottawa, 40 at Fredericton and 50 at Halifax.

The Alberta Department of Highways uses about 15,000 tons of salt a year on provincial roads. The City of Toronto alone uses about 80,000 tons of salt a year.

METROPOLITAN POPULATIONS

Dominion Bureau of Statistics population estimates at June 1, 1967, for 19 metropolitan areas show that, in the five years between the 1961 census and the 1966 census Kitchener had shown the largest percentage increase (23.9 per cent); Saskatoon was next with 20.8 per cent; and Calgary and Edmonton had identical increases of 18.6 per cent; Toronto had increased by 18.2 per cent; Regina by 17.0 per cent; and Montreal, Ottawa and Quebec had increased by over 15 per cent. From June 1, 1966 to June 1, 1967, Calgary showed the largest percentage increase at 4.8; London increased by 3.9 per cent; Toronto and Vancouver increased by 3.5 per cent each; and Hamilton had increased by 3.1 per cent.

During the 1966-67 census year the largest numerical increases were in the following areas: Toronto, 75,000; Montreal, 52,000; Vancouver 31,000; Calgary, 16,000; Hamilton, 14,000; and Ottawa, 13,000. The gain in the Ottawa area raised the population past 500,000. The large gains for these areas was partly due to the increase in immigration during the year.

As in the preparation of the post-census population estimates for the provinces, births occurring in these areas between June 1, 1966 and June 1, 1967, are added to the population at the census date and deaths are subtracted. Immigrants in this period, reporting these metropolitan areas as places of destination, were also added, while allowance was made for losses in population owing to emigration. Finally, the net in- or out-movement due to internal migration was calculated from Family Allowance figures and other data. These estimates will be revised when data from the 1971 census become available.