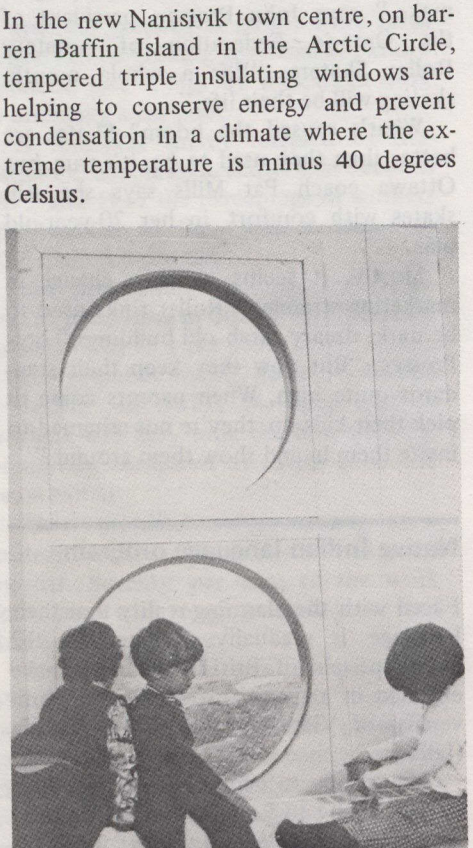
Energy-saving windows

In the new Nanisivik town centre, on barren Baffin Island in the Arctic Circle, tempered triple insulating windows are helping to conserve energy and prevent condensation in a climate where the extreme temperature is minus 40 degrees Celsius.



These triple glazed insulating windows conserve energy and prevent condensation.

Canadian Pittsburgh Industries Twindow insulating glass units were chosen for the composite structure in the northern area which houses municipal and recreational facilities – a joint venture between Nanisivik Mines Limited (Project Manager: Strathcona Mineral Services Limited) and the government of the Northwest Territories – for their heat retentive, energy-saving values.

Each triple glazed unit is designed to be capable of insulating against heat loss 72 percent better than windows of single glass panes. Because the inside pane of the window stays relatively warm, condensation and frost have little chance to form. This eliminates water drainage and cold down-drafts.

To keep out snow, which in the far North is so fine it will build up through the minutest crevice or crack, the lites were installed as portholes. The enclosures around the windows make it easier to cope with the hazard of any weak points, such as corners, where the fine grain snow could leak in.

Installation of the glass lites was simple. The shell was simply punctured and the windows put in, then the enclosures fixed around them.

In the two phases of construction 117 windows were enclosed as portholes, although a number of rectangular windows using triple glazing were installed.

Canadian Pittsburgh Industries has plants in London, Ontario; Moose Jaw, Saskatchewan; and Montreal, Quebec.

Nova Scotia to host festival

The annual Canadian Heritage Festival will be held this year in Nova Scotia, from July 15-23.

Bringing together amateur talent from all across Canada, the national festival of song and dance, depicting the cultural heritage of each province and territory, will take place in Halifax and six other centres across the province.

At a cost of $250,000 the 1979 Canadian Heritage Festival is being produced by the Multiculturalism Directorate of the Federal Government in association with the Nova Scotia Department of Recreation.

This year's festival will be co-ordinated by the Multicultural Association of Nova Scotia, while the Canadian Folk Arts Council will provide the artistic direction. A special opening show will be presented at the Rebecca Cohen Auditorium in Halifax on July 16.

Hope for heart patients

A new enzyme discovered by a University of Victoria (UVic) professor may lead to significant advances in treating people predisposed to coronary heart disease.

Dr. Tom Buckley, a biochemistry professor, recently received an $18,000-grant, renewable for two years, from the National Science and Engineering Council to continue his work.

Enzymes are protein molecules made by all living cells which act as catalysts in speeding up chemical reactions in plants and animals. Without enzymes, the chemical reactions would take place too slowly for life, as we know it, to be possible.

Human cells produce an enzyme known as LCAT which converts cholesterol into forms which the body can cope with, thus preventing the fatty substance from building up in the arteries and blocking the passage of blood to the heart.

Some people, however, lack sufficient quantities of LCAT to convert cholesterol effectively and are predisposed to coronary heart disease. The LCAT deficiency is hereditary among some people.

But, among a much larger proportion of the population, alcoholism is the cause of the deficiency and consequent susceptibility to heart trouble.

It was about a year-and-a-half ago, while he and a graduate student were looking for another bacterial protein enzyme, that Dr. Buckley accidentally discovered the enzyme now known as PCAT. Testing to date reveals that PCAT is very similar to LCAT in that it also has the property of being able to convert cholesterol.

The discovery leads to several offshoots in scientific and medical investigations. There are thousands of enzymes known to man and many that can convert cholesterol, but PCAT is the first discovered enzyme that converts it in the same way that the human enzyme LCAT does.

Another exceptional fact about PCAT is that it is produced by bacteria instead of mammalian cells.

As bacteria do not have cholesterol, there is no reason for them to have such an enzyme. Dr. Buckley and his colleagues therefore believe that PCAT may mark the discovery of a new bacterial toxin.

"We think the bacteria which produce PCAT use it to change the cholesterol in animal cells, to give the bacteria an advantage in attacking the cells," he said.

(From the Ring, *May 18, 1979.)*

Oil-spill research gets grant

A Newfoundland research group has received a $1.5-million grant from a Calgary-based charitable foundation to further its studies into oil spills in frigid waters.

The Centre for Cold Ocean Resources Engineering at Memorial University in St. John's received the grant from the Devonian Foundation.

The research group is developing techniques of aerial photography in extreme northern regions so that oil spills can be pinpointed immediately.