

Rolling towards auto trade surplus

Canada is heading towards a second consecutive multi-billion-dollar automotive trade surplus with the United States, its best ever sustained performance under the 18-year-old auto pact, according to *Canadian Press*.

Some figures are still to come, but the 1983 total is likely to surpass the record \$2.85-billion surplus set in 1982.

Statistics released by the Automotive Parts Manufacturers' Association of Canada indicate that the trade surplus reached almost \$2.5 billion by the end of last October, a \$540-million increase over that of the same period in 1982 and not far from the annual record.

The 1982 total followed deficits of \$1.7 billion in 1981 and \$2 billion in 1980. Since the auto pact was signed in 1965, Canada has run deficits in all but four years.

Although the 1983 figures should not be seen as a sign that the problems for the Canadian car industry are over, they reflect the sharp improvement in North American sales and the importance of the auto pact in helping to stabilize the Canadian industry.

Under the auto pact, the "big four" North American carmakers — General Motors, Ford, Chrysler and American Motors — are required to match production in this country with the value of their Canadian sales. In return, their vehicles are allowed duty-free access to the Canadian market.

With this production safeguard and surging demand in the United States market, where four-fifths of Canadian production is exported, car and truck plants in this country are expected to approach and possibly surpass production records this year.

Industry figures show car and truck production in 1983 reached 1.52 million units, up almost 20 per cent from those produced in the previous year. A similar increase this year would put the industry well above the record 1.74 million units turned out in 1978.

Dennis DesRosiers, research director for the parts association, said a chronic parts deficit is one main reason Canada "saw red ink" in over-all automotive trade for so many years. But parts companies now are making more sales to the US, partly due to the turn-around in that pivotal market and partly because improved competitiveness has won them new customers.

New chips step on the "GaAs" to speed communications

Research and development by Ottawa high-technology firm Optotek Ltd. into a revolutionary communications technology may make "GaAs" a household word and keep Canada abreast of Japan and the United States in this important research.

GaAs stands for gallium arsenide, a compound formed by combining gallium and arsenic. Integrated circuits, or chips, made from GaAs can operate in much higher frequencies than commonly-used silicon chips. They are ideal for use in microwave communications such as direct broadcast satellites, earth stations and military communications systems.

Processing technique

Optotek has just received a \$1-million contract from the Department of Communications and the Department of National Defence for the second phase of a project to perfect a processing technique for GaAs transistors and identify applications of the technology for Canadian users.

President David Kennedy says Optotek hopes to become the first Canadian company with manufacturing capability for GaAs transistors, which will not neces-

sarily replace silicon integrated circuits but will extend their range.

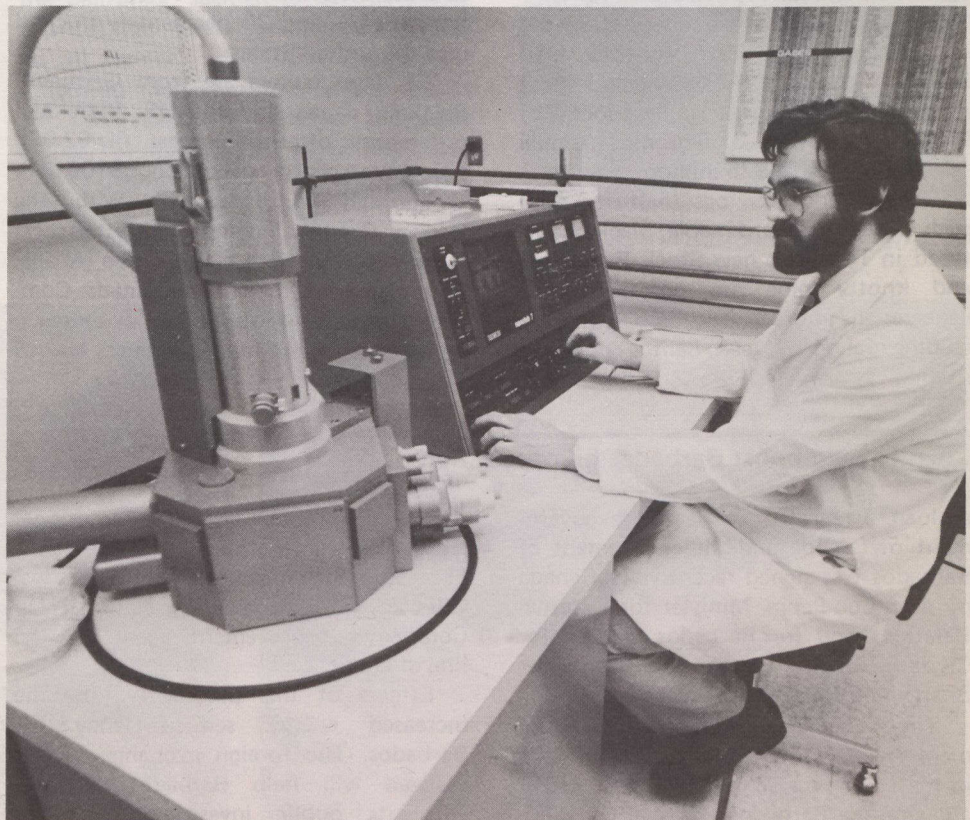
Canada is one of the few world sources for the relatively rare element gallium, so Canada may have an advantage in producing the transistors.

More sophisticated circuits

Mr. Kennedy says Optotek is not interested in the direct broadcast satellite market, which is dominated by the Japanese, but hopes to develop more sophisticated circuits used in telecommunications for high-speed digital switches and in military secure communications systems.

"One of the aims of the project is to identify special market applications for devices and circuits based on GaAs that we could effectively participate in. Then we'll determine where we stand in terms of addressing specific applications and manufacturing custom circuits."

In addition to its work with GaAs transistors, Optotek is one of the most advanced light-emitting diode (LED) manufacturers in North America. LEDs are the miniature electronic devices used to produce display screens in such products as calculators and digital watches.



Program manager Randy North at scanning electron microscope. Researchers hope their new technology will help keep Canada abreast of Japan and the United States.