

Contrecoeur, and will replace the existing casting machine at Edmonton as part of the expansion of the Edmonton works. The industry will be watching the progress of Algoma's concast facility, which is the first slab-casting unit as opposed to billet casting. It is widely agreed that, in a longer-term perspective, continuous casting is one of the keys to more efficient steel-making. Sidbec/Dosco is installing the direct-reduction process in conjunction with its expansion at Contrecoeur. Quebec Steel Products will use concast in its new facility.

Direct reduction is a relatively recent innovation in steel-making technology. The process involves grinding iron ore to a fine-particle size and compressing the particles into iron briquettes. Heating in a reducing atmosphere produces briquettes of up to 95 percent pure iron. Briquettes can be charged directly into an electric-arc furnace-coming out as steel. As yet, no integrated facility uses this process and a great number of technical difficulties have to be surmounted. Stelco is one of the pioneers in direct reduction and a member of an international consortium that has researched and developed the SL/RN (Stelco-Lurgi-Republic-National) direct-reduction process. The company has indicated that it might use this process at its Nanticoke development, although the final decision has been delayed and nothing definite has yet come out; the technology is not sufficiently advanced to proceed at present.

Again, the normal replacement and additions to facilities will be beneficial to the industry. However, the Canadian industry is, by and large, an efficient and modern grouping; thus, the impact of new additions is less noticeable from a productivity standpoint. The industry seems to feel that the findings of new efficiencies is becoming more and more difficult. High levels of spending on capital projects for anti-pollution devices involve an additional cost-burden for the industry -- if only over the short term.(4)

#### Domestic demand

The construction industry is the largest user of steel, accounting for an estimated 28 per cent - 30 per cent of domestic shipments. This total include 20 per cent to the construction industry directly and an estimated 8 per cent to 10 per cent from steel shipped to warehouses. Over the past five years, the construction industry has shown only marginal real growth. This performance is mirrored in the 3.0 percent annual growth of steel shipments to the construction industry.

Domestic shipments to the automotive and aircraft industries amount to about 11 per cent of total domestic shipments. The major automobile companies, either directly, or indirectly through auto-parts supplies, are believed to account for over 90 per cent of this total. The impetus to growth in this market goes back to 1965 with the signing of the United States/Canadian Automotive Free Trade Agreement. The success of the Agreement from the steel industry's point of view can be gauged by the 8.6 percent annual increase since 1965 in shipments to the domestic automotive industry.

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(4) Appendix IV provides a table showing trends in steel-making technology.