The Beaton Institute's Steel Project

by **ELIZABETH BEATON**

In 1987, the Nova Scotia government began to modernize the Sydney Steel Plant. Constructed at the turn of the century, the plant has been one of Canada's major suppliers of steel rails, and played a significant part in the nation's war effort in two world conflicts. In the next three years, it will be transformed from an outdated, inefficient operation to a new complex of modern buildings with a significantly scaled-down work force. The modernization will necessitate the demolition of early buildings and will eliminate "traditional" processes of making steel. The closure of the coke ovens operation in 1987 marked the first stage of the demolition; other buildings and equipment will follow in the next year.

In recognition of the historic importance of the steel plant, the Beaton Institute of Cape Breton Studies at the University College of Cape Breton (UCCB) has initiated a project to document the history of steelmaking in Sydney, and to record the modernization process being undertaken by Sydney Steel Corporation (SYSCO). The demolition of the existing plant has added urgency to planning and implementation of the project. The Institute obtained an Aid to Small Universities Grant through the Social Sciences and Humanities Research Council of Canada to acquire and begin organizing selected papers from SYSCO and the Cape Breton Development Corporation (DEVCO) dealing with steel production and coal mining in Nova Scotia. Other activities in this initial project included the videotaping of threatened processes within the operating steel plant, such as the making of coke. The work carried out in 1987-1988 was a first step in a major endeavour called the "Steel Project," a unique opportunity to document one of the few remaining examples of early Canadian industrialization.

The Steel Project's objective is the documentation of the historical, social, and economic importance of all aspects of the Sydney Steel Plant. The project will provide a connection between Sydney Steel, the Cape Breton industrial community, and the University College of Cape Breton. The documentation of the plant and the process of modernization will emphasize the centrality of the history of Sydney Steel and will provide a link between the past and the future of the workers and their community. This nationally important archival project will stress the joint involvement of the steel workers, the community, business interests, and government in Canada's steel industry.

The project has several components: the organization of papers of SYSCO and DEVCO; visual documentation of processes, equipment, and buildings; fur-ther documentation through the oral testimony of those involved in steel production; and the appropriate dissemination of the material to the community, to scholars, and to those involved in the promotion of economic development on both regional and national levels.

The history of industrialization in Cape Breton forms the basis of the project. In 1893, an American financier, H.M. Whitney, came to Nova Scotia to become president of the Dominion Coal Company. Dominion Coal, a syndicate of eight indepen-

dent coal mines, soon produced more than three million tonnes annually. In less than a decade, Whitney proceeded to combine investments in local coal and limestone deposits with the purchase of iron ore mines in Bell Island, Newfoundland. In 1899, the Dominion Iron and Steel Company (DISCO) was formed, with financing and control located in Montreal.

Shortly after these developments, a modern steel plant was erected on a 480-acre site on the south side of Sydney Harbour, boasting four 250-ton-capacity blast furnaces, blooming, billet, wire, rod, plate, and structural mills; a foundry, a machine shop, two coal piers with unloading towers, twenty-five miles of railway tracks and an imposing general office building. The first blast furnace was blown in 1901.

Competition for DISCO was provided by the locally owned Nova Scotia Steel and Coal Company plant across the harbour in Sydney Mines. The latter's assets were eventually amalgamated with DISCO to form British Empire Steel Corporation in 1921. During this period, the population of industrial Cape Breton grew explosively with the influx of thousands of labourers from rural Cape Breton, Newfoundland, Great Britain, and from many parts of Europe, the Mediterranean nations, the West Indies, and even East Asia. Sydney grew from a small town of 2,500 in 1885 to a city of about 20,000 by 1920. At their peak, Nova Scotia's coal and steel industries employed more than 16,000 men, most of them in Cape Breton.

The rights of the workers had no protection until well into the twentieth century. The industrial history of Cape Breton is punctuated by the workers' struggle for fair wages and improved conditions, a struggle which received extensive press coverage and which has been analyzed by historians and others, enhancing Cape Breton's reputation as a cradle of labour solidarity in Canada.

Cape Breton's steel and coal industries began to decline almost immediately following the First World War. Absentee corporate managers seemed incapable of adjusting to fluctuating market conditions and changes in the structure of the industry. By 1967, the last private owners, the British-based Hawker Siddeley Group, threatened to close the aging plant. The dramatic March of Concern of October 1967 was the response of the people of Cape Breton, whose solidarity in face of the threatened destruction of their livelihood resulted in the takeover of Sydney Steel by the government of Nova Scotia and the formation of SYSCO. A year later, Hawker Siddeley completed its withdrawal from Cape Breton by divesting itself of its Cape Breton coal mining operations. A federal agency, the Cape Breton Development Corporation (DEVCO), took control of Cape Breton's remaining mines.[1]

In the 1970s and 1980s, the threat of plant closure hung over Sydney like the toxin-filled smoke billowing from its furnaces. The plant would go on losing money so long as it continued using outdated equipment and methods and failed to diversify its products. Furthermore, with a growing awareness of environmental issues and the political force to fight them, the people of Sydney demanded pollution controls with modernization. The indignity of trading jobs for health was at last brought to public discussion. Finally, in 1986 the provincial and federal governments agreed to spend two hundred million dollars on modernization and pollution controls.

The Steel Project will add significantly to the Beaton Institute's collections of materials on the history of industrialization in Cape Breton. Holdings presently

consist of photographs, manuscripts, maps and plans, and a limited video and sound collection. The papers acquired from SYSCO in 1987 came from thirteen locations within the plant, including the SYSCO General Office. They date back to the early organization of the steel plant, and include personnel, production, and shipping records. Under the supervision of the Director of the Beaton Institute, students Archie Campbell and Jim Gilbert gathered the material and brought it to the Institute for sorting, identification, and boxing. Approximately twelve metres of records were accessioned and are presently being organized for research use.

The visual documentation of the steel plant's equipment and its many buildings is now well underway, using black-and-white photography, slide photography, and video. Special attention is given to window, door, and roof details, to types of construction, and to indications of changes over the life of the buildings. Most early buildings which predate 1930 are of brick construction and incorporate strikingly stylistic features such as arches, complicated voussoirs, copper flashing, and even cut stone foundations. Before 1930, a surprising amount of consideration was given to lighting and ventilation. Given the limitations of the time, these were afforded by natural means — daylight through windows with multiple lights, and air circulation through the roofs. The plant's earliest buildings have high, gabled roofs; most post-1940 buildings are lower and flatter, usually of steel frame and concrete or galvanized construction. Lighting and air supply for the newer buildings depends more on electrical sources.

Changes in plant operations, management policies, and marketing are all embodied in the shops and machinery. Old processes stand alongside new ones. For example, part of the Forge building was built in 1920, but the remainder resulted from the renovations of the 1970s. The east door of the Foundry retains its 1925 arched brick doorway, but the west entrance is steel-framed with a sliding galvanized door. The direct and indirect functions of steelmaking within the buildings show fascinating accommodations between the old and the modern. Much of the equipment in the Machine Shop, for instance, dates from its beginnings in the 1920s, yet the overhead crane is radio-operated. The ancient craft of forging is constantly being adapted to modern technologies, but its basic processes remain largely unchanged.

Early twentieth-century steelmaking processes are still in use at Sydney Steel. Blast furnaces prepare the iron, which then goes to the open-hearth furnaces where it is mixed with scrap steel and lime to make steel. Soon, a new electric arc system will be used. SYSCO's steel is used primarily for rails but, previously, many different items were produced, including wire, nails, and various primary steel materials used in other Nova Scotia plants, such as the Trenton Car Works. Remnants of the buildings and the equipment for this more diversified steel production have been adapted to the years' changes.

The excellent architectural drafting archive maintained by SYSCO has been a great asset to the Steel Project. Two large vaults in the Drafting Office contain extensive files of building plans, both on microfilm and in the form of original ink on linen. Front and side elevations of all buildings are available, as well as original floor plans and subsequent changes for each building. There are also minutely detailed technical plans for machinery, changes in equipment, and process charts. The SYSCO archives also contains film footage dating from the 1940s on both coal

mining and steelmaking in Cape Breton, as well as on iron ore mining in Newfoundland. SYSCO has agreed to allow copies of these films to be made for archival preservation by the Beaton Institute.

Documentation of various processes — forging, the making of coke, the pouring of iron and brass in the foundry, blast furnace and open hearth processes — is being carried out by means of videotaping. The decision to film specific material is primarily dependent upon the imminence of demolition, but also upon safety conditions, coordination between management, informants, and timing of the various steelmaking processes. The Sony 8mm camera used to record the processes has low-light capacity, an important feature in taping interior operations in dusty or murky atmospheres. For broadcast and editing, the 8mm footage is "kicked up" to standard 3/4-inch tape to give greater resolution and ease of handling. Original footage is stored under controlled conditions, while the working 3/4-inch copy is used for viewing and for editing.

The value of video as a research/collection tool cannot be overstated. It is innovative while being inexpensive and extremely accessible. Its chief value, however, is its ability to present material contextually. Video can focus on a particular subject while incorporating sound, action, and the surrounding environment. Unlike the static and isolated information to be gleaned from written documents and photographs, video gives an immediacy to documentation which will certainly revolutionize research in the near future. The limitation of video is found, of course, in the subjectivity of the researcher whose own agenda may dictate the type and approach of collection. It is the same sort of subjectivity that governs other collections in "active" archives. Yet, the great advantages of video overcome these limitations and make it a substantial advance in archival technology.

Taped interviews will be used in combination with visual and written evidence to enhance the story of steelmaking in Sydney. Standard oral history methodology will be used. A questionnaire guide will be followed, but informants will be given enough scope to enlarge upon their perception of the impact of steelmaking on the community. Steelworkers, both men and women, will be interviewed, as will steel wives and other family members. Steelmaking does not begin and end at the plant gates — its safety, the passion of its labour movement, its sounds, smells, and toxic pollutants affect the entire community. Management, union officials, and politicians played diverse roles in making steel; their experience will also be part of the Steel Project.

The Beaton Institute is endeavouring to document the history of steelmaking as broadly as possible, and wishes to involve the community at every phase of the research process. Therefore, it has set up an advisory committee with a mandate to give direction to the project. The committee consists of steelworkers, union officials, SYSCO management, and university representatives. Less formal advice on implementation of the research will be sought through occasional "brainstorming" sessions with people directly involved in steelmaking. The Nova Scotia Museum Complex has acted in an advisory capacity since the project's inception.

The cooperation of SYSCO has been a primary factor in the initial success of the Steel Project. Steelworkers have a keen sense of the historical importance of this project, and have enthusiastically supported every phase of the research. Harvey

Macleod, Industrial Relations Director of SYSCO, has been consistently generous with time and guidance in making the plant and its archives accessible to researchers. The safety of researchers while on plant property is a major consideration and responsibility for SYSCO. The plant continues to produce steel while being rebuilt; the wearing of safety gear and the accompaniment of a safety officer are mandatory.

The Steel Project is a comprehensive documentation of one of the few remaining chapters of early Canadian industrialization. The changes which have taken place in Canadian steelmaking during the past century will be detailed through preservation and organization of written records, the visual reproduction of buildings and processes, and recordings of peoples' reflections on their experiences. This documentation stage of the project will take at least two years.

Disseminating the information, the final stage, will involve a broad cross-section of the community and education systems, especially museums. Materials gathered by the Steel Project will form part of the archival collection at the Beaton Institute. They will not only strengthen its relationship to the community as an active archive and research institute, but will also provide a valuable research base for study of the history of steelmaking in Canada.

The Steel Project is under the direction of Dr. Robert Morgan, Director and Archivist of the Beaton Institute. Research is being coordinated by Elizabeth Beaton, Research Associate, and the project's researcher/technician is Peyton Chisholm.

Note

1 This résumé of the coal and steel industries in Cape Breton is based on several sources: Brian Campbell, "Early Cape Breton: Surviving Uncertainty," in *Cape Breton: A Changing Scene* (Sydney, 1986); Don Macgillivray, "Herman Melville Whitney Comes to Cape Breton: The Saga of a Gilded Age Entrepreneur," *Acadiensis*, Vol. IX, No. 1 (1979); Macgillivray, "Military Aid to the Civil Power: the Cape Breton Experience in the 1920s," *Acadiensis*, Vol. III, No. 2, (1974); David Frank, "The Cape Breton Coal Industry and the Rise and Fall of the British Empire Steel Corporation," *Acadiensis*, Vol. VII, No. 1, (1977); and various sources at the Beaton Institute Archives.