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# **ENGINEERING HISTORY PAPER #2 “A Bibliography of the History of Canadian Science and Technology”**

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There is at least one extensive catalogue of publication citations that can help the student of the history of engineering in Canada. This is ***A BIBLIOGRAPHY OF THE HISTORY OF CANADIAN SCIENCE AND TECHNOLOGY***, compiled by Arnold Roos and published in 1995 by the Canadian Science and Technology Historical Association. It contains over 9000 citations for technology and over 1000 for science.

The technology section begins with a general sub-section, which includes such disparate entries as:

- J.J. Brown, ***IDEAS IN EXILE: A HISTORY OF CANADIAN INVENTION*** (Toronto: McClelland and Stewart, 1967)
- Peter J. Wyllie, ***TECHNOLOGICAL ADAPTATION IN CANADIAN MANUFACTURING, 1900-1949*** (Journal of Economic History, Vol. 44, No. 3, September 1989) and
- Langford and de Bresson, ***THE ROLE OF HYDRO-QUEBEC IN THE RISE OF CONSULTING ENGINEERING IN MONTREAL*** (Scientia Canadensis, Vol. 16, No. 1, 1992)

Also under this sub-section are citation headings for bibliographies, economics, industrial development and heritage, only a minority of which have relevance for engineering.

Then follows a sub-section on technical societies, education, exhibitions and patents, all of which have some relevance for engineering. The Engineering Institute of Canada, however, is not well represented. The only citations that include substantial discussions of EIC are the two that refer to the work of J. Rodney Millard, ***THE DEVELOPMENT OF THE ENGINEERING PROFESSION IN CANADA, 1880-1920*** (PhD thesis) and, based on this thesis, ***THE MASTER SPIRIT OF THE AGE: CANADIAN ENGINEERS AND THE POLITICS OF PROFESSIONALISM, 1887-1920*** (Toronto: University of Toronto Press, 1988).

The bulk of the technology section is devoted to citations based on aspects of engineering: civil engineering; transportation; energy; materials, minerals and processing; electronics and mechanical and electro-mechanical technology; computing; communications and records; agriculture; industrial organization and labour; and military technology. Then follows a series of short citation lists for pioneer, aboriginal, medical, sport and environmental technologies and for women and technology. Finally, there is a sub-section of citations for over 40 prominent Canadians associated with engineering in some way, included among whom are Alexander Graham Bell, T.C. Keefer, Sandford Fleming, Casimir Gzowski, the Shanly brothers, William van Horne, Joseph-Armand Bombardier, W.H. Merritt and C.J. Mackenzie.

The science citations are grouped into four main sub-sections: general reference; science and its history; histories of the individual science disciplines; and biographies. None of those included in this last sub-section can be identified directly with engineering.

In his introduction, Dr. Roos indicates that he is well aware of the shortcomings of his bibliography. The citations were collected over a period of over 25 years, from his graduate student days through his career to 1995 as an engineering/technology historian. He goes on to say:

"The bibliography, as presently comprised, does have serious limitations that should be pointed out. (It) is not considered as being at all comprehensive. At no time was an effort made to survey the literature prior to 1969. The only citations included prior to that date were those that I came across in my own research and in those journals, books and bibliographies I scanned for possible works in the field. Furthermore, journal research was restricted to those contained in my

departmental library which is limited in its holdings. As far as other sources were concerned, only those citations which, through their titles, appeared to deal with the history of Canadian science and technology were included. No effort was made to verify whether or not the citations that were included really dealt with some aspect of the history of Canadian science and technology. In other words, this is a working bibliography, which, because of its size, allows a quick entry into the field."

And it is the best we have - up until this point in time!

A.H. Wilson