

DULUTH--Instrumentation and controls in mining and beneficiation of ores will headline the program for the 20th annual mining symposium Tuesday and Wednesday (Jan.13-14) in Duluth.

Sponsored by the University of Minnesota center for continuation study, general extension division, the symposium will be held in conjunction with the annual meeting of the Minnesota, section, American Institute of Mining and Metallurgical Engineers.

Symposium sessions in the Norshor theater will begin at 9 a.m. Tuesday with brief comments by S. R. B. Cooke, professor and head, mines and metallurgy, University of Minnesota, and J. M. Nolte, dean, general extension division, both of Minneapolis.

Topics Tuesday will include types and potentials of instrumentation and controls, basic control functions, control and instrumentation in flotation, practical aspects of controls in a modern milling plant, instrumentation in a shaft pelletizing furnace, and instrumentation and control problems in milling practice.

Chairmen of sessions Tuesday will include A. S. Henderson, Silver Bay, superintendent of process engineering, Reserve Mining Co.; F. D. DeVaney, Duluth, chief metallurgist, Pickands, Mather and Co., and D. W. Scott, Hibbing, general manager, Continental Sales and Equipment Co.

Eugene P. Pfleider, Minneapolis, professor and division chief, mines and metallurgy, University of Minnesota, will be chairman of the Wednesday morning session. Topics will include instrumentation and controls in open-pit and underground mining operations, modern digital calculators in engineering analysis and application of electric computers to mining engineering problems.