

modified and installed in a demonstration plant at Muscle Shoals, Alabama. In its first two months of operation the cell has shown a greater tolerance to load variations than the conventional permeable diaphragm cell.

At Dryden, Ontario, a Nafion membrane cell chlorine plant has been in operation since the beginning of this year. The plant was designed by Hooker Chemicals and Plastics Corporation for Dryden Chemicals Ltd.

J. E. Currey and A. T. Emery reviewed the developments in Hooker membrane cell design and technology that led up to the commissioning of this plant.

Finally, Dr. S. F. Mellish of ICI Mond Division, using published information, gave an economic assessment of the performance of membrane cells by comparison with conventional diaphragm cells.

B. M. G.

## Temperature Control in the Casting of Copper Alloys

Temperature control in the continuous or semi-continuous casting of copper alloys is vital to the production of sound material. For any given pouring temperature there are optimum rates of pouring and of cooling, and a new installation for the rapid and visible measurement of this temperature has recently been put in at Usine Metallurgiques Suisse Selve et Cie at Thun. The usual platinum: rhodium-platinum thermocouple not only records graphic-

ally but by means of an electronic circuit displays the temperature at any one of eight locations on a large luminous panel when a control button is activated. The operator can thus concentrate on the handling of the immersion pyrometer with an eye on the panel, which shows both the location and the temperature. The installation was supplied by Ets. Dr. Ness of Küssnacht, Switzerland, under the supervision of Dr. F. Roggen of Selve.

