The specimens were tested at temperatures of 67-115°C and at pressures up to 5.5 kbars. The pressure vessel used for the creep tests is shown in Fig. 1. The pressure vessel consisted of two vessels, one containing the specimen and the other the loading weight. The upper vessel was enclosed by a furnace regulated by a proportional controller and the temperature was maintained to within ±0.1°C. Dow Corning 200 silicon oil was used for the pressurizing media at the lower pressures and for tests above 4 kbars white gas was used.

The strain rates were measured using an external linear differential transformer system which is shown in Fig. 2. In this system the soft iron transformer core is connected to the load, and thus the specimen, by a length of piano wire rod and a brass spacer. The core is contained within the 1/16 in. bore of a 5/16 in. diameter length of non-magnetic stainless steel pressure tubing which is sealed off at the bottom and connected into the pressure vessel using a standard high pressure fitting. The linear variable differential transformer is situated around the pressure tubing allowing detection of the core movement, and thus the strain, to be made through the tubing wall. Calibration of the system and measurement of total strain was accomplished using the micrometer assembly shown in Fig. 3. A micrometer drive motor for displacing the transformer and a recorder actuated