

glass cylinders shown in Figs. 10 and 11 are epoxied to the bottom of the large recessed wells of the dural plate. The Textolite disks with the pins in them are placed inside the cylinders and screwed to the plate through the support legs.

An electrical lead is then soldered to the center wire of each pin and the braid of the lead is soldered to a bus wire that grounds the outer conductor of the pin. The other ends of the leads are attached to a plug that connects to the PFN circuit. The pins are grouped and identified so that the signals from four pins, one from each level, go to a single oscilloscope. Also, the pins in each group are wired so that the first and third levels have one polarity and the second and fourth levels have the opposite polarity. In this manner, the identity of each signal going to each of the 24 oscilloscopes is known.

An alumel-chromel thermocouple is placed in one of the sample chambers for monitoring the temperature of the liquid at shot time. During the winter months, a heater tape is attached to the dural driver plate to maintain the temperature of the liquids near 20°C.

This completes the laboratory assembly phase of the experiment. In the next phase, the apparatus is taken to a firing point which includes an explosive firing area and a control room in close proximity with interconnecting wiring. It is here that the glass chambers are filled with the proper liquid and the explosive joined to the shot. The thermocouple voltage is monitored on a recorder and if necessary the dural plate is heated. The pin circuits are tested and checked for connection to the correct oscilloscopes. Then the pins are charged to plus or minus 100 volts through the pulse forming