

# Rutherford Laboratory

## Technical Leaflet

---

E8

### MECHANICAL SERVICES SECTION

The Section provides general engineering support to the Laboratory from the lifting and transporting of heavy equipment, 36 ton loads are not uncommon, to the precise optical surveying of scientific equipment. (Fig.1) Installation and commissioning of major plant is part of its duties, it has liaison with the Southern Works Organisation of U.K.A.E.A. and takes over all mechanical services on the completion of buildings. The Section also works closely with scientific staff on the detailed assembly, modification and commissioning of equipment such as particle velocity separators, (Fig.2) and also has its own workshops fully equipped for its work including steam trap and meter testing and the calibration of optical equipment for the whole laboratory.

The Section is responsible for the maintenance modification and extension of the following services, steam water, town gas and compressed air, all of which are supplied by A.E.R.E., together with space heating, air conditioning and local cooling water systems and trade waste pumping installation. The installed underground mains total more than  $5\frac{1}{2}$  miles, space heating systems have individual capacities of up to 3,000,000 B.T.U./hr. and air conditioning plants have individual capacities of dissipating over one million B.T.U./hr. Building heating is predominantly by steam using either unit heaters or hot water calorifiers. With a view to efficient utilisation steam consumption records are taken and comfort levels in offices checked from time to time. The above plant together with cranes up to 80 ton capacity, mobile cranes, lifting equipment generally and machine tools are maintained on a planned system.



FIGURE 1 COMBINED OPERATIONS FOR HEAVY LOAD

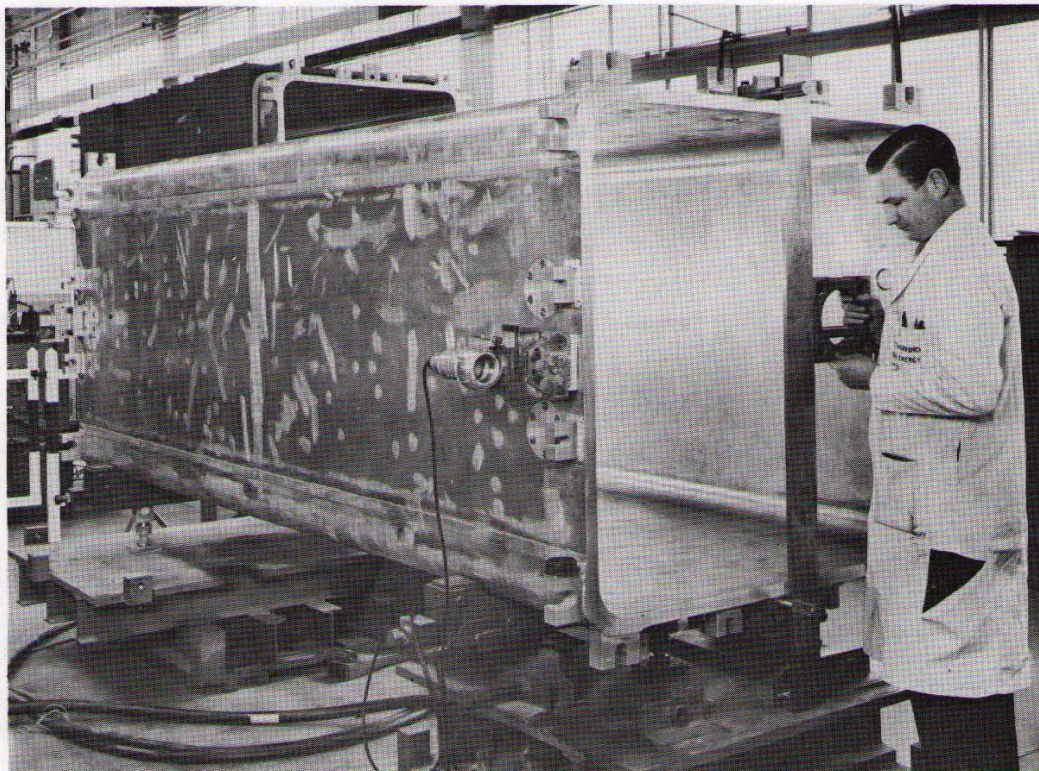


FIGURE 2 ALIGNMENT OF SEPERATORS (HL25111)