the wedges are in a state of compressive stress. The high compressive strengths avaiable in Graph-Air metals suggested their use as the wedge material. By employing an ambient air quench from 1475°F, and a further air quench to -11°F with dry-ice, the compressive elastic limit of the Graph-Air was raised to 400,000 psi. These precautions were taken to assure that the wafer is confined in an elastically deformable surrounding, consistent with the assumption employed in the analysis.

(3) Steel Containing Ring. This ring serves as a radial support for the wedges, and was designed to withstand an internal pressure of 50,000 psi. 4140 steel, heat treated to a 190,000 psi yield strength, was used as the ring material. A slight interference fit between the steel containing ring and wedges was provided to maintain the assembly as an integral unit.

(4) Safety Ring - As the name implies, the safety ring is constructed of a ductile material (303 stainless steel), and serves to restrain the motion of the internal parts in case a fracture should occur.

The anvil design is shown in Figure 3 with the containing ring. The wafer makes actual contact with the anvil cones, which in turn are seated in a conical wedge assembly. The anvil wedges are supported by two press-fitted containing rings and an outer safety ring. The anvil cones were fabricated from Graph-Air, and were designed in the concial shape to take advantage of the supporting stresses.