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.