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## REFERENCES

1. J.C. Jamieson and A.W. Lawson, "X-ray Diffraction Studies in the 100 Kilobar Pressure Range", *J. Appl. Phys.*, 33, 776, 1962.
2. W. Bassett, T. Takahashi and P.W. Stook, "X-ray Diffraction and Optical Observations on Crystalline Solids Up to 300 Kbar", *Rev. of Sci. Instruments*, 38, 37, 1967.
3. H. Mao, W.A. Bassett and T. Takahashi, "Effect of Pressure on Crystal Structure and Lattice Parameters of Iron up to 300 Kbar", *J. Appl. Phys.*, 38, 272, 1967.
4. T. Takahashi, W.A. Bassett and H. Mao, "Isothermal Compression of the Alloys of Iron up to 300 Kilobars at Room Temperature: Iron-Nickel Alloys", *J. of Geophysical Res.*, 73, 4717, 1968.
5. T. Takahashi and W.A. Bassett, "High-Pressure Polymorph of Iron", *Science*, 145, 483, 1964.
6. R.M. Keeler and A.C. Mitchell, "Electrical Conductivity, Demagnetization, and the High-Pressure Phase Transition in Shock-Compressed Iron", *Solid State Comm.*, 7, 271, 1969.
7. J.Y. Wong, R.K. Linde, and P.S. DeCarli, "Dynamic Electrical Resistivity of Iron: Evidence for a New High Pressure Phase", *Nature*, 219, 713, 1968.
8. G.J. Piermarini and C.E. Weir, "A Diamond Cell for X-ray Diffraction Studies at High Pressures", *J. of Res.*, 66A, 325, 1962.
9. L.D. Blackburn, L. Kaufman and M. Cohen, "Phase Transformations in Iron-Ruthenium Alloys Under High Pressure", *Acta. Met.*, 13, 533, 1965.
10. F.J. Karasek, "Techniques for the Fabrication of Ultrathin Metallic Foils", *Nuc. Sci. and Eng.*, 17, 365, 1963.
11. W. Class, A. Iannuci and H. Nesor, "Some Innovations and Observations on High Pressure Diffractometry", *Norelco Reporter*, 13, 87, 1966.
12. M.B. Myers, F. Dachille, and R. Roy, "Pressure Multiplication Effect in Opposed-Anvil Configurations", *Rev. of Sci. Inst.*, 34, 401, 1963.
13. P.W. Bridgeman, "The Compression of 39 Substances to 100,000 KG/CM<sup>2</sup>", *Proc. Am. Acad. Arts Sci.*, 76, 55, 1948.

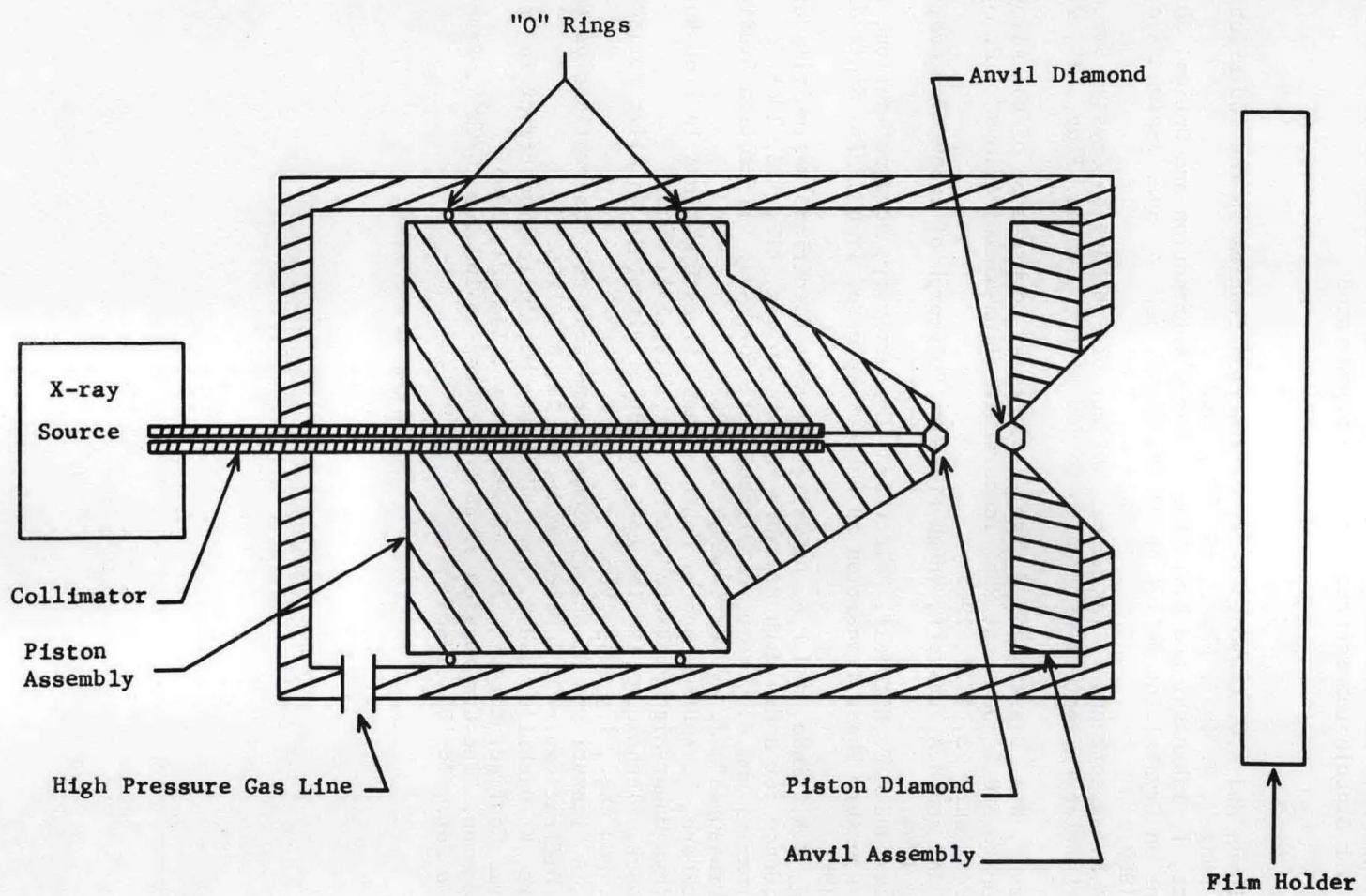


Figure 1. Schematic drawing of high-pressure x-ray diffraction camera.