

Fig. 2. Effect of vitrification pressure on compressive elastic modulus of polystyrene glasses.

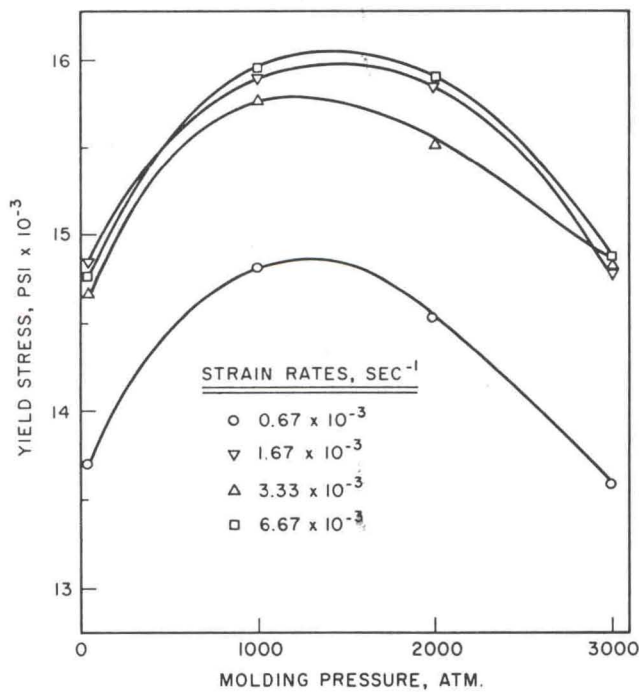


Fig. 3. Effect of vitrification pressure on compressive yield stress of polystyrene glasses.

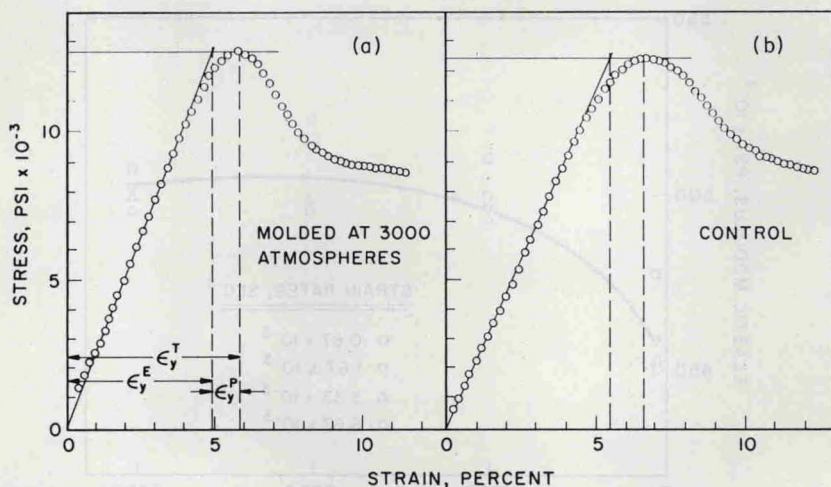


Fig. 4. Typical compressive stress-strain curves for polystyrene glasses: (a) molded at 3000 atmospheres; (b) compression-molded control. Separation of yield strain into ϵ_{y^E} and ϵ_{y^P} is explained in text.

approximately constant thereafter as the molding pressure was raised further. The increase in modulus is indicative of a more compact, strongly bound glass produced at high pressures. Moduli are also increased by treatments that reduce the volume of the sample in more conventional ways, such as by cooling or testing under hydrostatic pressure.^{12,13}

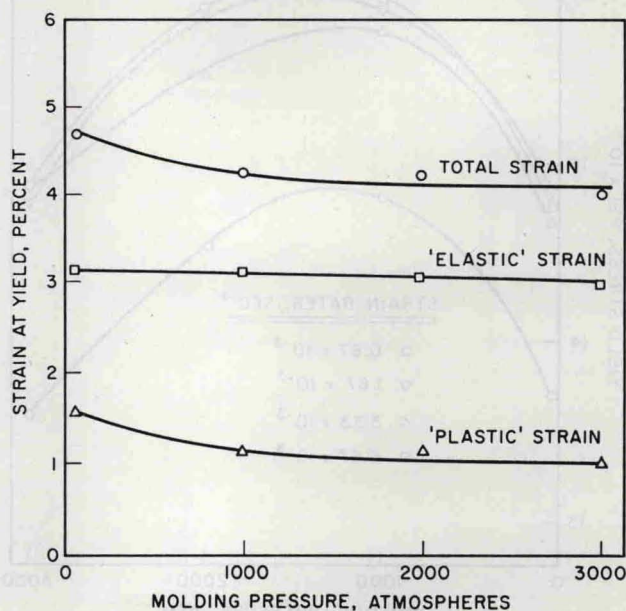


Fig. 5. Typical effect of vitrification pressure on strain at compressive yield of polystyrene glasses. Strain rate for data shown was $6.67 \times 10^{-3} \text{ sec}^{-1}$.