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Temperature effects and strain rate effects on the piezoelectric charge production of PZT 95/5[1] AMNAH KHAN, WILLIAM PROUD, Institute of Shock Physics, Blackett Laboratory, Imperial College London, London, UK, SW7 2BW — The effects of varying strain rates and temperatures on the charge output and fracture of the piezoceramic PZT 95/5 have been investigated. The samples are studied in the temperature range of $-20\,^{\circ}\mathrm{C}$ to $+80\,^{\circ}\mathrm{C}$; a range of strain rates (10^{-4} s^{-1} to 10^{+3} s^{-1}) is achieved using quasi-static loading equipment, drop weights and Split Hopkinson Pressure Bars. Stress-strain data is obtained, along with high-speed images, allowing the physical processes e.g. fracture, to be quantified.

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