

## SUPPLEMENTAL DATA

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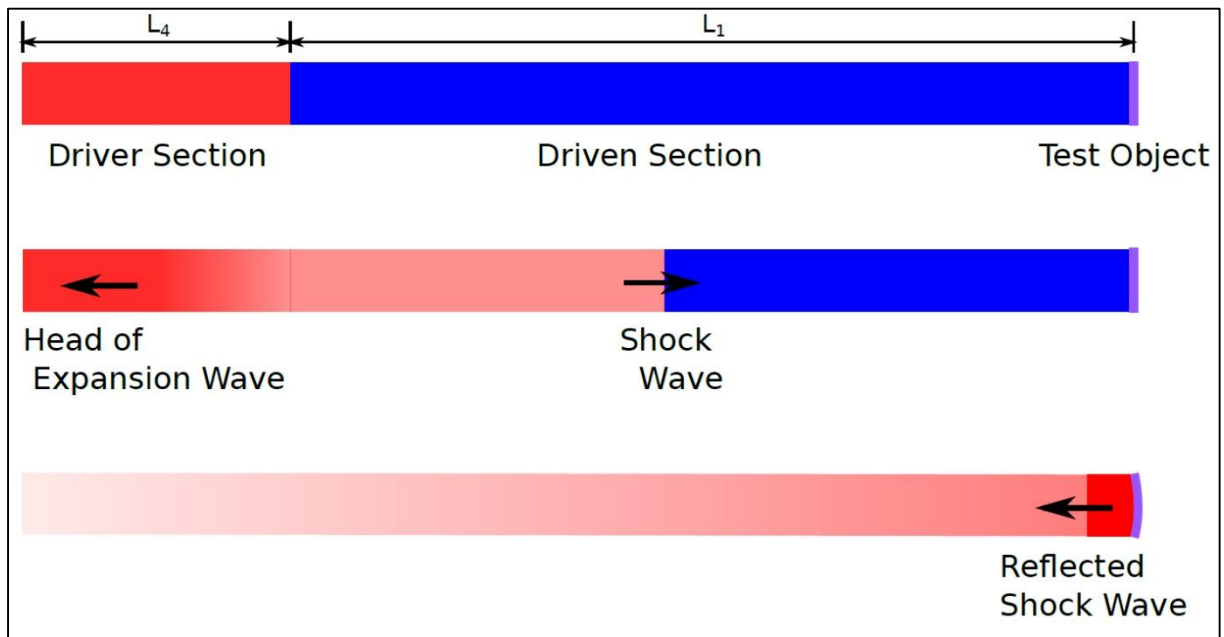
# Microstructural Response of Shock-Loaded Concrete, Mortar, and Cementitious Composite Materials in a Shock Tube Setup

Sutapa Deb, I. Obed Samuelraj, Nilanjan Mitra, and Gopalan  
Jagadeesh

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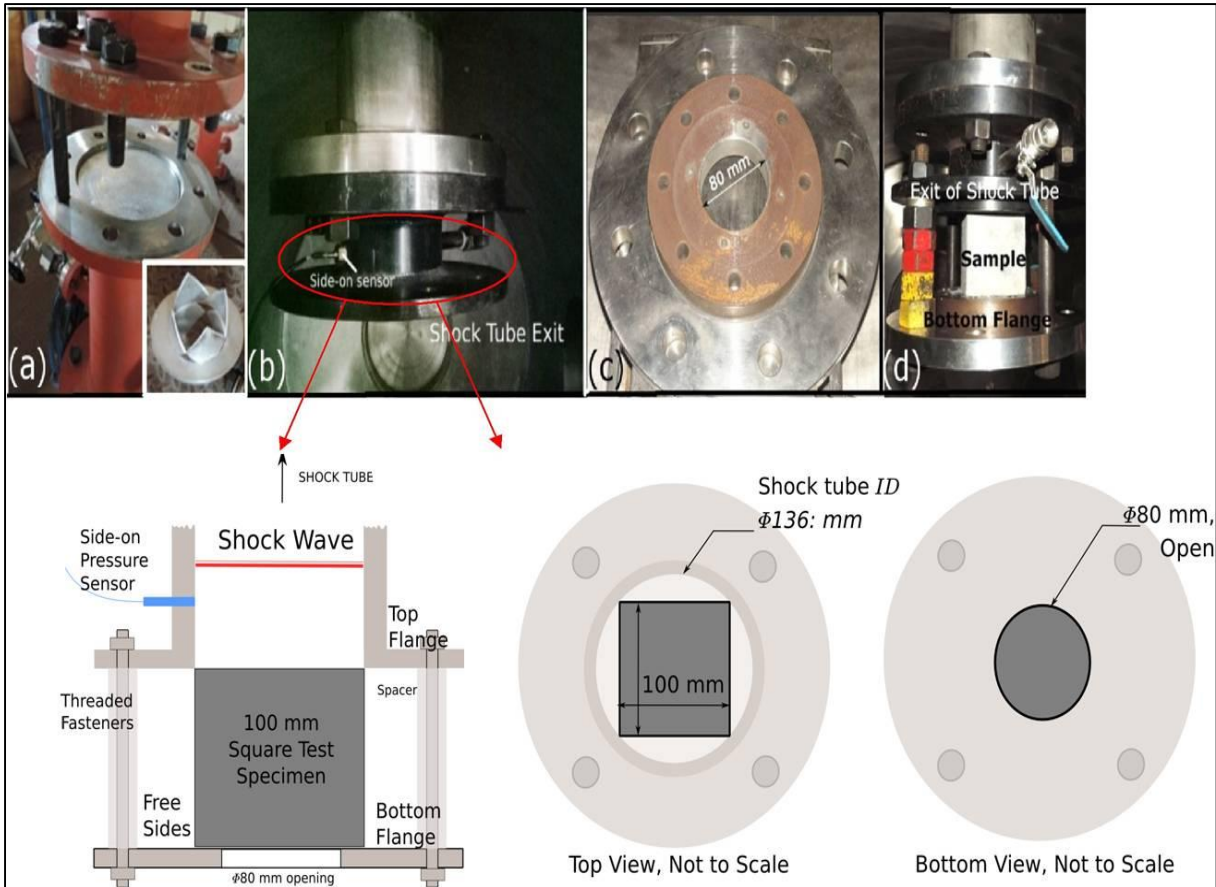
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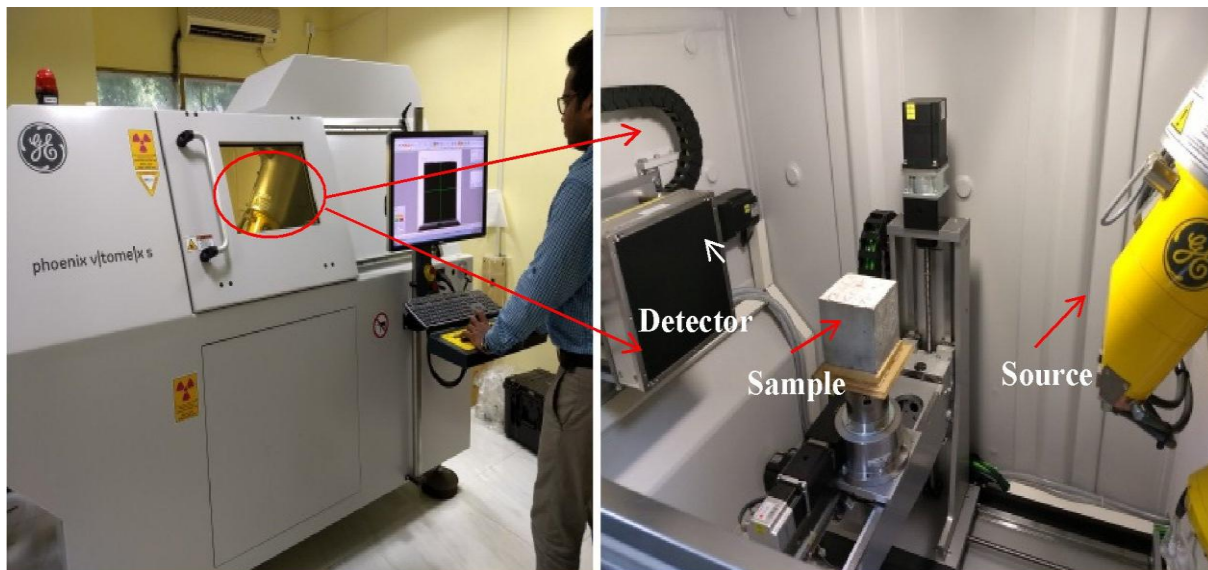
**Fig. S1.** A schematic drawing showing the operation of the shock tube. The sample is located at the end of the shock tube



**Fig. S2.** A photograph of the vertical shock tube facility showing the driver tube, the driven tube and the safety tank on which these tubes sit. The shock tube opens into the safety tank which serves to contain the fragments of a potential damage that may occur to the sample



**Fig. S3.** Photograph showing the process in preparing for a shock tube experiment. The diaphragm is mounted at the diaphragm station (a), and the sample is mounted by sandwiching it between the exit flange of the shock tube (b) and the bottom flange (c), the mounted sample is as shown in (d), The ruptured diaphragm may be seen in the inset of (a), the side-on sensor used to measure the pressures in each run is seen in (b) which has been zoomed to show in the schematic picture in (e) with the top and bottom views of this arrangement shown in (f)



(a)

(b)

**Fig. S4.** (a) MicroCT set-up and (b) Sample placement along with detector and source