

Abstract Submitted
for the SHOCK15 Meeting of
The American Physical Society

Phase transition of tin under ramp compression¹ TAO CHONG, JIANHENG ZHAO, CAEP, ZHIPING TANG, USTC, FULI TAN, CAEP, CAEP TEAM — In this paper, the phase transition experiments of tin were done under magnetically driven quasi-isentropic compression technology on the facility CQ-4, which is capable to deliver a current of peak of 4 MA within rise time of 470 ~ 600ns. As shown in Figure 1, the loading pressure P produced by large pulsed current J interaction with the self-inducing magnetic field B acts on the surfaces of electrodes of electrode panels. Simulation of one dimensional dynamic process with MEOS (multiphase equation of state) phase transition model is done. The simulation input is a stress loading history boundary of surfaces of electrode panels, and the stress is calculated by the plate/window interface velocity. Since the plate/window interface velocity doesn't have the information of the rarefaction wave reflection between the sample and window, the process can only simulate the loading stage now.

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Date submitted: 28 Jan 2015

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