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Instantaneous Point Explosion in Incompressible Fluid-like Media MICHAEL GRINFELD, STEVEN SEGLETES, The US Army Research Laboratory — The problem of point explosion is one of the most famous and extensively developed in in the sense of corresponding physics, mechanics, and applied mathematics. There are many reasons for that based on its practical importance and theoretical beauty. We refer interested readers to the publications of Sedov, Taylor, Laudau and Lifshitz, and Lavrent'ev and Shabat. In the paper, we discuss this classical program from the standpoint of terminal ballistics and present our novel results relating to the special situation when the media can be treated as an "effective" incompressible liquid. Sedov, L.I., Similarity and Dimensional Methods in Mechanics, CRC Press, 1993. Taylor, J., Explosion. II. The Atomic Explosion of 1945. Proc. Roy. Soc. London, A201, 1065, 1950, p. 175. Landau, L.D. and Lifshitz, E.M., Fluid Mechanics, Pergamon Press, 1959. Zeldovich Ya. B. and Raizer, Yu.P., Physics of Shock Waves and High-Temperature Hydrodynamic Phenomena,Dover, New York, 2002. Lavrent'ev, M.A. and Shabat, B.V., Hydrodynamic Phenomena and Their Mathematical Models. Hauka, 1973 (in Russian).

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