

Research of a Gas Phase under Electrical Explosion of the Titan Foil in Liquid

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Experimental studies of pulsed electric explosion of thin titanium foils in water with discharge power of ~ 0.2 GW are described. The production of a considerable amount of molecular hydrogen is revealed whose origin can be explained neither by water decomposition nor by known chemical reactions. A nuclear mechanism of occurrence of the observed molecular hydrogen upon electric explosion is hypothesized. Emphasis is laid on some measurements confirming the hypothesis.

Key words: Electrical Explosion; Hydrogen.