Calorimetric & Nuclear Diagnostic of Anode Plasma Electrolysis

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It was continued the investigation of plasma electrolysis with anode gas discharge. Voltage as earlier was (200-600)V. Current amplitude was (1-10)A. The electrolyte composition was (5-10)M \( \text{NaOH} \) & 2M \( \text{Na}_2\text{CO}_3 \) in usual water. Nickel foil (0.1 x 50 x 100 mm³) was used for cathode & Tungsten or Niobium rod (Ø6mm) was used for anode.

For receiving experimental results there were used following diagnostic methods: 1) Thermocouple calorimetry; 2) Tritium scintillation diagnostic in electrolyte; 3) Erzions flux generation with help of radiometer “Kran” & 2 dozimeters “Sosna”, 4) Scintillation diagnostic (CsI & NaI) of \( \gamma \)-radiation, 5) Neutron diagnostic with He³ counters, 6) Photo emulsion & Plastic Solid State Detector tracks diagnostic.

Received results are discussed.