

The present invention relates to facilities for automating iron ore enrichment processes. The proposed device for automatically stabilizing liquid flow rate contains a hydraulic converter, a pipeline for supplying the liquid, and an automatic flow rate controller for the liquid. The hydraulic converter contains an inlet pipe socket, an intermediate pipeline, and a hydraulic accumulator. At the pipeline for supplying the liquid, a gate valve and the float detecting element of the flow rate controller are installed. The present invention provides an optimal ratio between pressure losses in the pipeline for supplying the liquid and pressure losses in the hydraulic converter in various operation modes as well as optimal dimensions and parameters of the design elements of the device. As a result, accuracy in stabilizing liquid flow rate can be increased due to the maintaining the set level of the liquid in the hydraulic converter and reducing the effect of the liquid density on the stabilization accuracy.