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Innovative Method of Greatly Reducing Flow Resistance WEIYI LIN — In this paper, firstly, the aerated pipe flow experiment is introduced. And some experimental research on comparison between different volumes of air entrained is presented. Secondly, the technical characteristics of gravity pipe flow under the action of Torricelli's vacuum, shortly called as GPFUTV are dissertated, including creative and functional design, fundamental principle and the strange energy loss phenomena, etc. Thirdly, an appeal in relation to the experimental research, the applied studies and basic theory research is given. For instance, Reynolds' experiment under GPFUTV condition, the potential for GPFUTV to be developed for deep seawater suction technology and lifting technology for deep ocean mining, flow stability and flow resistance under GPFUTV condition, etc.

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