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C2Po1G-01 [38]: Investigation on Dry Vacuum Pumps Suitable for a 500 W@ 2K Helium Refrigerator at TIPC

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In this paper, a set of dry vacuum pumps suitable for a 500W @2K helium refrigerator were investigated. Process flow diagram and the control strategies of a set of dry vacuum pumps were designed. The Experiments including the mass flow rate and pressure ratio of a set of dry vacuum pumps with the air and helium gas were tested. The input pressure of 40 kPa and output pressure of 1.05~1.1 bara could be acquired and the maximal mass flow rate was up to 28 g/s. This set of dry vacuum pumps can satisfy the boundary conditions of 500W @2K helium refrigerator.

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