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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.

Primary author: Prof. XIE, Xiujuan (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences))

Co-authors: Dr YANG, Shaoqi (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)); Mr DENG, Bicai (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences);University of Chinese Academy of Sciences); Ms PAN, Wei (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)); Mr WANG, Yunlong (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)); Dr ZHU, Weiping (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)); Prof. LI, Qing (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)); Prof. GONG, Linghui (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences))

Presenter: Dr YANG, Shaoqi (State Key Laboratory of Technologies in Space Cryogenic Propellants (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences))

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