Contribution ID: **199** Type: **Poster presentation (105min)**

The application of cryogens in liquid fluid energy storage systems

Thursday 10 July 2014 10:30 (2h 15m)

This article describes the application of cryogens in the liquid fluid energy storage systems and compares the liquid fluid energy storage systems with the conventional compressed air energy systems. The study focus on the thermodynamic characteristics of the different cryogens used in the liquid fluid energy storage systems. It is found that the liquid fluid energy storage systems have competitive factors like the high energy density and no geographical limitation, and comparative analysis is conducted to present the advantages and disadvantages of different cryogens. The results show that the systems have a promising future in the large scale energy storage.

Author: Mr WANG, Sixian (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China; 2.University of Chinese Academy of Sciences, Beijing 100049, China)

Co-authors: Mr GUO, Jia (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China); Prof. WANG, Junjie (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China); Dr XUE, Xiaodai (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China); Mr ZHANG, Xuelin (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China; 2.University of Chinese Academy of Sciences, Beijing 100049, China); Prof. ZHOU, Yuan (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China)

Presenter: Prof. WANG, Junjie (1.Key Laboratory of Cryogenics, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China)

Session Classification: Thu-Mo-Posters Session 3.4

Track Classification: C-14: New devices and novel concepts