

Tentative Outline

Special Thematic Issue for the journal

Title of the Thematic Issue: Improvement of performance and reliability in compressors and expanders

Guest Editors: Zeyu Li

• Scope of the Thematic Issue:

Compressors and expanders are one of the most important equipment in various fields, i.e., power cycle, refrigeration and petrochemical industry. Therefore, their performance and reliability is critical to the system operation. This thematic issue aims to facilitate advanced research related to the improvement of performance and reliability in compressors and expanders, in terms of original research as well as review articles.

Keywords: Compressor, Expander, Performance, Reliability, Vibration, Deformation, Capacity regulation, Lubrication

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Thermodynamic simulation of compressors and expanders
- Experiment study and diagnosis of compressors and expanders
- Vibration and deformation analysis of compressors and expanders
- Capacity regulation of compressors and expanders
- Lubrication of compressors and expanders

Tentative titles of the articles and list of contributors:

Tentative titles of the articles and list of contributors with their names, designations, addresses and email addresses should be provided.

1. Investigation of vapor-injected rotary compressors. (Baolong Wang, Tsinghua University, Beijing, China, wangbl@tsinghua.edu.cn).
2. Performance enhancement of cross vane expander-compressors. (Kim Tiow Ooi, Chair of School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore, mktooi@ntu.edu.sg).
3. Theoretical analysis of linear compressors. (Eckhard A Groll, Purdue University, West Lafayette, USA, groll@purdue.edu).
4. Analysis of oil-free linear compressors. (Kun Liang, University of Sussex, Brighton, UK, kun.liang@sussex.ac.uk).
5. Recent development of compressors in refrigeration system. (Yunho Huang, University of Maryland, USA, yhhuang@umd.edu).
6. Research on multi-stage centrifugal compressors. (Maik Gentsch, Chair of Measurement and Control, Technische Universität Berlin, Germany, maik.gentsch@tu-berlin.de).
7. Study on oil-free steam piston expander for combined heat and power system. (Patrick Salagnac, Université de la Rochelle, France, Patrick.salagnac@univ-lr.fr).
8. Leakage in sliding rotary vane expanders. (Fabio Fatigati, University of L'Aquila, Italy, fabio.fatigati@univaq.it).
9. Thermodynamic analysis of two-phase expander. (Moonyong Lee, Yeungnam University, Gyeongsan, Republic of Korea, mynlee@yu.ac.kr).
10. Performance analysis of BCC alloy as metal hydride compressor. (Kiyotaka Goshome, National Institute of Advanced Industrial Science and Technology, Fukushima, Japan, goshome.kiyotaka@aist.go.jp).

Schedule:

- ✧ Thematic issue submission deadline: December 31, 2020

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