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放射線照射による伝熱への影響評価

Evaluation of Heat Removal Performance under Gamma Ray Irradiation

学術論文（査読あり）

- [1] K. Wang*, N. Erkan, K. Okamoto. A new model for predicting the critical heat flux based on nucleation site density in downward-face boiling. J. Nucl. Sci. Technol. (2019) 1-16.
- [2] K. Wang*, N. Erkan, K. Okamoto. A study on the effect of oxidation on critical heat flux in flow boiling with downward-faced carbon steel. Int. J. Heat. Mass. Transf. 147 (2020) 118966.
- [3] K. Wang, H. Gong*, L. Wang, N. Erkan, K. Okamoto. Effects of a porous honeycomb structure on critical heat flux in downward-facing saturated pool boiling. Appl. Therm. Eng., 166 (2020) 115036.
- [4] K. Wang*, N. Erkan, K. Okamoto. Effect of finned structure on critical heat flux (CHF) in downward-face pool boiling." Mechanical Engineering Journal. (2020) 19-00500.
- [5] K. Wang*, N. Erkan, K. Okamoto. Oxidation effect of copper on the downward-facing flow boiling CHF under atmospheric condition. Int. J. Heat. Mass. Transf. 156 (2020) 119866.
- [6] K. Wang, H. Gong*, L. Wang, N. Erkan, K. Okamoto. Irradiation effects of CHF on bare and porous honeycomb surface in downward-face saturated pool boiling. Prog. Nucl. Energy. 127 (2020) 103444.
- [7] L. Wang, K. Wang, N. Erkan, Y. Yuan, G. Chen, B. Nie, F. Li, K. Okamoto, Metal material surface wettability increase induced by electron beam irradiation, Appl. Surf. Sci. 511(2020)145555.
- [8] L. Wang, Y. Yuan, N. Erkan, H. Gong, K. Abdul, F. Li, K. Okamoto, Influence of surface wettability increase induced by Gamma-ray irradiation on critical heat flux in downward-facing flow boiling. Ann. Nucl. Energy, 142(2020), 107420.

学術論文（査読なし）

- [1]
- [2]
- [3]

博士論文

- [1] Kai Wang, A study on the effect of surface oxidation on critical heat flux in downward-face boiling, 東京大学工学系研究科博士論文(2019)
- [2] Yao Zhang, A study on the heat pipe for cooling fuel debris in Fukushima Dai-ichi NPP decommissioning, 東京大学工学系研究科博士論文(2019)

修士論文

- [1] 川嶋晃仁、福島第一原子力発電所の燃料デブリ除熱に有効なヒートパイプに関する研究、東京大学大学院工学系研究科(2019)
- [2]

卒業論文

- [1]

国際会議

- [1] Kai Wang*, Nejdert Erkan, Koji Okamoto, Rong Cai, Effect of finned structure on critical heat flux (CHF) in downward-face pool boiling. Tsukuba, Japan, Icone-27, May 19-24, 2019
- [2] Kai Wang*, Nejdert Erkan, Koji Okamoto, Experiment and numerical simulation of a single bubble formation under a downward face of different contact angels. Portland, USA, NURETH-18, August 18-23, 2019
- [3] Kai Wang*, Nejdert Erkan, Koji Okamoto, CFD prediction of ultra-high critical heat flux for subcooled water flow boiling in vertical tubes. Portland, USA, NURETH-18, August 18-23, 2019
- [4] Y.Zhang, S.Suzuki and K.Okamoto, "Gamma ray irradiation effect on the performance of water heat pipes" 27th International Conference on Nuclear Engineering (ICONE-27), 2019, May 19-24, Tsukuba, Ibaraki, Japan
- [5] Y.Zhang, S.Suzuki and K.Okamoto, "Effect of Water Radiolysis on the Heat Pipe Under Gamma Ray Irradiation For Fukushima Dai-chi Decommissioning use", 18th International Topical Meeting on Nuclear Reactor Thermal Hydraulics

[19020]

(NURETH-18), 2019, Aug 18-23, Portland, Oregon, USA

国内会議

[1] Kai Wang*, Koji Okamoto, Nejdet Erkan, Preliminary research on a new model to predict CHF. 福島大学, 日本原子力学会「2020年春の大会」, March.16-18, 2020.

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招待講演等

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解説・記事等

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新聞発表等

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特許等

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