Dengqing ZHOU

Refrigeration Engineer
Master of Engineering
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Personal Blog

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Objective *****

Education

M.Phi. in Engineering thermophysics, Shanghai Jiao Tong University (SJTU), China, Year 2012-2015
Main courses: Advanced Heat Transfer, Computational Fluid Dynamics, Advanced Engineering Thermodynamics, Microfluid Flow and Heat Transfer
GPA 2.8 in major, 3.3 overall (Rank 1/15)

B.S. in Thermal Engineering, Chongqing University (CQU),China, Year 2008-2012
Main courses: Heat Transfer, Fluid Mechanics, Engineering Thermodynamics
GPA 3.18 in major, 4.0 overall (Rank 5/45)

Experience

Master Student, SJTU Year 2012.9-2015.6
Thesis: The thermophysical property and critical heat flux enhancement mechanism of nanofluids [thesis grade: A]
Supervisor: **Prof. Huiying WU**

- Investigated the viscosities of $Al_2O_3/ZnO/CuO$ ethylene glycol based nanofluids experimentally, and studied the influence of Brownian motion and aggregation of nanoparticles dispersed in it.
- Analyzed theoretically the anomalous enhancement mechanism of thermal conductivity of nanofluids;investigated the structural configuration of clusters in nanofluids and studied quantitatively its effect on thermal conductivity enhancement.
- Proved the capillary pumping effect is the leading mechanism that resulting in the significant CHF enhancement of Al_2O_3 water based nanofluids, experimentally.

Undergraduate student, CQU Year 2012
Thesis: Fuzzy inverse inference for two dimensional steady state heat conduction problem [thesis grade: 95/100]
Advisor: **Prof. Guangjun WANG**

- Established an inversion model for the prediction of the unknown temperature distribution and convective heat transfer coefficient on the target boundary, and then compared it with the classical conjugate gradient method.
- Employed the self-adaptive fuzzy inference based on variable universe to improve the above numerical model.

Refrigeration Engineer, Midea Group, Year 2015-

- The aerodynamic and structural design of centrifugal compressor.
- The performance design and optimization of centrifugal chiller.

Extracurricular Activities

Lecturer(part-time), Shanghai Dazhong Technical School, Shanghai 2014-2015

- Teacher of advanced mathmatics

Honors

- Outstanding graduate of Shanghai City 2015
- National Merit Scholarship 2014
- Young scholar award for conference best paper 2014
- Level-1 Academic Excellence Scholarship 2015
- Postgraduate Academic Excellence Scholarship of SJTU 2013
- 1^{st} Place in the Graduate Entrance Examination 2012
- Entrance Scholarship of SJTU 2012

Skills

Languages: C, Python,C++, Matlab

Software: OpenFoam, Fluent, CFX, Compal, Comsol, ICEM

Publications

1. Zhou D.Q, Wu H.Y. Relative viscosity of ethylene glycol-based nanofluids[J]. CIESC Journal, 2014,06:2021-2026. (In Chinese)
2. Zhou D.Q, Wu H.Y. A thermal conductivity model of nanofluids based on particle size distribution analysis[J]. Applied Physics Letters, 2014, 105: 083117-083121.
3. Zhou D.Q, Wu H.Y. Study on the capillary pumping effect in enhancing CHF of nanofluids. 2014 Annual Chinese Engineering Thermophysics conference. (In Chinese)
4. Zhou D.Q, Preliminary research on horizontal falling-film evaporator design [EB/OL]. BeiJing:Sciencepaper Online [2017-09-08]. http:// www.paper.edu.cn/releasepaper/-content/201709-44.(In Chinese)

English Proficiency

TOEFL 96 (R/L/S/W:29/22/22/23)

Passion

Reading; Ping-Pong; Swimming