



VARGHESE SAM ERALIL

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PROFILE

MASTER OF CHEMICAL ENGINEERING

Chemical Engineer postgraduate with a great passion for hydrodynamic and fluid flow study with research experience in computational fluid dynamics. Highly motivated and creative with a working understanding of industrial chemical processes and a drive to make a career as a process design engineer.

EDUCATION

MASTER OF CHEMICAL ENGINEERING

Curtin University, Australia (2016-2017)
Overall: 67.96%

BACHELOR OF CHEMICAL ENGINEERING

Manipal Institute of Technology, India (2011 - 2015)
Cumulative GPA: 6.07

PROJECT WORK AND INTERNSHIP

POSTGRADUATE WORK (2016 - 2017)

Research Project

- Wide research exposure in the field of computational fluid dynamics and simulations of flow characteristics.
- Wide amount of in depth study of the modern day developments and research in the field of hydrodynamics of a trickle bed reactor.
- Simulation study to determine the flow characteristics of single phase and two phase flow through a trickle bed reactor.
- Use of simulation results in the testing of flow through offshore floating LNG terminals.
- Results used to measure effect of wave motion of the sea on reactor performance.

Design Project

- Exposure to chemical process design company project given by Clough Engineering.
- Group work on a wide variety of aspects such as process flow and instrumentation and piping diagrams.
- Full process design and simulation of an LNG regasification terminal using simulations on Aspen HYSYS.

UNDERGRADUATE STUDY (2011-2015)

- Use of cold energy from regasification to convert atmospheric air into liquid Nitrogen and liquid Oxygen. and creative utilization of remaining cold energy towards maximum efficiency.
- Detailed designing and instrumentation diagrams of one major and minor equipment in the process flowsheet and to determine safety and shutdown and startup procedures.
- Economic study and feasibility study to predict financial worst case and best case of the project

- Final semester research project on optimization of a debutanizer column using simulations and experimental setups.
- Research and study of distillation separation and mass transfer operations for theoretical and modern day applications.
- Wide use of process simulations using HYSYS to improve the efficiency of the separation efficiency of butane in a column.
- Use of experimental runs on a pilot scale experimental setup in order to confirm results from the simulations.

INTERNSHIP (DEC 2014 - JAN 2015)

- Wide exposure to marketing and finance aspects of engineering design and procurement at Larsen and Toubro Heavy Engineering division.
- Study of petrochemical and fertilizer manufacturing processes including process flow diagrams from different methods.
- Factory experience in chemical equipment fabrication and detailed design of parts.

SKILLS

- AspenTech including Aspen HYSYS and Aspen PLUS.
- ANSYS Fluent and CFD Simulations.
- Mesh Creation and Geometry creation softwares such as Trelis and iCEM-CFD.
- Advanced skills in basic computing apps such MS Word, Excel and Programming languages like C++ and JAVA.
- High level of written and oral communication skills.

REFERENCES

Dr. Ranjeet Utikar (r.tuikar@curtin.edu.au) - Research Project Supervisor, Senior Professor, Curtin Univeristy - Australia.

Mr. Pankaj Chandra pankaj.chandra@postgrad.curtin.edu.au) - Research Assistant, Curtin University - Australia.

Mr. Laxman Kumar (laxman.kumar@manipal.edu) - Undergraduate Project Supervisor, Assistant Professor, Manipal Univeristy - India.

Mr. Vairavel P (vairavel.p@manipal.edu) - Associate Professor, Manipal University - India.