Arash Moradian

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Experience

Mechanical Design Engineer **07/2022 –02/2024**
Bronze Industrial Group

- Designed products and optimized existing models using CAD software Catia
- Analyzed products utilizing Numerical (finite element) methods using Ansys Workbench (Structural, Fluent)
- Produced documentation such as BOM, FPC, DFMEA, PFMEA and CP alongside a multidisciplinary team
- Participated in project management, from the initial RFQ and feasibility analysis to mass production
- Prepared progress reports and liaise with stakeholders

Mechanical Engineer **02/2020 –02/2022**
Abadan Petroleum University of Technology

- Took charge of commissioning, maintenance and repair of laboratory equipment
- Supervised and cooperated with researchers in conducting experiments
- Reviewed and evaluated technical specifications of equipment's internal parts to identify the required spare parts
- Prepared technical specifications for the procurement of spare parts
- Identified and negotiated with vendors and manufacturers of equipment and spare parts and evaluated technical proposals

Project Engineer **01/2018 –01/2019**
Abadan Oil Refining Company

- Negotiated a contract between the university and the Abadan Oil Refining Company in order to complete a project as master's thesis
- Analyzed performance deterioration of a certain compressor in the company. And brought the drop of 25% in mechanical efficiency to the attention of stakeholders.
- Utilized free resources to learn and apply Hysys software for that task; cutting down on the cost of modeling and simulation considerably.
- Completed the project to the in allocated time proposing further steps for root cause diagnostics, and repairs which led to regaining efficiency of over 85%.
- Developed professional relationships with experts both on site and off.

Mechanical Field Engineer **02/2016 –02/2020**
Portavan Noor Khorshid Company

- Gained experience as the mechanical engineer in the design and development of flair gas recovery system.
- Improved collaboration and teamwork skills by working in close contact with a multidisciplinary team of engineers in planning and construction.
- Designed pipeline and instrument placement of turbo machinery in accordance to standards and equipment manufacturer guideline documentation.
- Reviewed and prepared technical documents to clarify and implement guidelines.
- Supervised technicians on site to ensure adherence to health and safety and relevant standards.
- Documented progress reports and communicated with stakeholders to ensure satisfaction and implement changes as needed.

EDUCATION

Master of Science in Computational Engineering **10/2023 – present**
Friedrich–Alexander university, Erlangen-Nurenberg

Master of Science in Mechanical Engineering **09/2016 – 02/2019**
Jundi-shapur University of Technology, Dezful

- CGPA: 3.6/ 4.00
- Dissertation: Performance analysis, deterioration measurement and fault diagnosis of a centrifugal compressor in Abadan oil refining company; a case study.
- Researched state of the art methods of deterioration evaluation and performance curve correction.
- Published the results in a national journal for mechanical engineering

Bachelor's degree in Mechanical Engineering **09/2012 – 08/2016**
Shahid Chamran University, Ahvaz

- CGPA: 3.35/4.0
- Final project: modeling and simulation of flow inside an internal combustion intake manifold
- Designed a 3D model of an intake manifold for an internal combustion engine in SOLIDWORKS utilizing creative methods to obtain measurements from the existing part due to inaccessibility of design documents.
- Simulated the air flow inside aforementioned manifold using Ansys Fluent.
- Analyzed design features and their impact on streamlines, turbulence and pressure drop in the part.
- Published the results in the 10th International Conference on Internal Combustion Engines. (In Persian.)

Publications

Modelling and study of efficiency deterioration of a centrifugal compressor in Abadan oil refining company **11/2020**
Mechanical Engineering Journal of Iranian Society of Mechanical Engineers (Link to the article)

Three-dimensional modeling and flow analysis in an internal combustion engine's intake manifold **02/2018**
10th International Conference on Internal Combustion Engines (Link to the article)

SKILLS

Software: 2D/3D CAD/CAM/FEA software suite SOLIDWORKS, Catia v5, CFD software ANSYS Fluent, MATLAB, Aspen Hysys, MS Office Suite (Excel, PowerPoint, Word)
Programming: Python, C++, FORTRAN, CNC
Languages: English (General IELTS 8.5), **Persian** (Native)