

KHALID F AL-MUTAIRI

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EDUCATION

King Abdulaziz University, Jeddah, Saudi Arabia

Apr 2021

B.S. in Mechanical Engineering

Concentration: Thermal Mechanical Engineering and Desalination Technology

EXPERIENCE

Maintenance & Operation, KAU Vice Presidency for Projects

Oct 2020 - Dec 2020

Summer Training Program

- Prevented scale & corrosion at the university's cooling unit plant & boilers
- Monitored water and ice temperatures and the mixing operations in chillers and ice storage tanks in the university cooling unit plant
- Oversaw oil-fired boilers used for sterilizing medical equipment and tools

RELEVANT PROJECTS

Designing a Parabolic Solar Collector

Jan 2020 - Dec 2020

Senior Design Project

- Led a group of 4 students to design a parabolic solar collector to heat a fluid in a pipe
- Designed a solar tracking system to maximize heat transfer
- Used SolidWorks to design and assemble the parts
- Used EES to estimate solar radiation components, based on ASHRAE clear sky model, and compare them to the experimental results
- Increased the thermal efficiency up to **47.2%**

Feasibility a Pipeline & a Pumping System

Aug 2020 - Dec 2020

Pumps and Hydraulics

- Designed a pipeline with complete pumping system to transport jet fuel from a tank farm in Yanbu refinery to King Abdulaziz airport.
- Applied acquired project costing & planning skills to investigate, research and study the technical and economic feasibility of building the project
- Analysed, sized and selected pumping system and pumping solutions (Layout, constructability, etc)

A Relative Humidity and Temperature Measuring Device

Aug 2019 - Dec 2019

Thermal Engineering Measurements

- Led a group of 3 to calibrate DHT-22 (a measuring sensor) for temperature and relative humidity
- Lowered the uncertainty as low as **0.35%** for temperature and **2.38%** for relative humidity
- Used an IoT platform to present the data remotely

SKILLS & LANGUAGES

Hard Skills

EES, Python, CAD (SolidWorks)

LaTeX, Microsoft Office (Excel, Word, etc)

Soft Skills

Team work, Critical Thinking, Adaptability, Flexibility

Leadership, Problem Solving, Time Management

Languages

Arabic (Native)

English (Fluent)