JOYDIPTO BOSE

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MECHANICAL ENGINEER

- Mechanical Engineer with professional experience in designing HVAC systems for commercial, residential and LEED buildings in accordance with ASHRAE 90.1 & 189.1
- Completed a Master's degree (Mechanical) from NC State University, E.I.T certification (Michigan) and internships at EPC firms such as CB&I and Bechtel
- Software Skills: AutoCAD, Carrier-HAP, Revit, ANSYS, HTRI, SolidWorks, CATIA, Compress, MS-Office

EDUCATION

North Carolina State University, Raleigh, N.C — August 2015 to May 2017
M.S., Mechanical Engineering — GPA: 3.7/4.00
Emphasis: Thermal Sciences and Energy Systems
Coursework: Heat Transfer, Computational Fluid Dynamics, Air Conditioning Systems

National Institute of Technology (NIT), Kurukshetra, India — July 2011 to May 2015
B.Tech, Mechanical Engineering — CGPA: 8.05/10

CERTIFICATION: Engineer-in-Training, Michigan

RESEARCH PROJECTS:

North Carolina State University, Department of Mechanical Engineering

- Performed integrated sustainable design for a Net Zero LEED building compliant with ASHRAE 90.1 & 189.1. Conducted analysis using energy modeling programs (Carrier-HAP) for HVAC system selection.
- Developed a method for improving the efficiency of liquid piston compressor in an Ocean Compressed Air Energy Storage (OCAES) system. Performed advanced heat transfer analysis on liquid compressor using multi-flow solver.

National Institute of Technology, Department of Mechanical Engineering

- Performed finite element (FE) analysis of a high pressure vessel using ANSYS. Evaluated vessel dimensions and validated results using alternative closed-form solutions.

PROFESSIONAL EXPERIENCE:

GreenTech Consulting, Inc, Cary, North Carolina, U.S.A

Mechanical Engineer (HVAC), July 2017 to Current:

- Designed HVAC and Plumbing systems for commercial and residential projects
- Performed equipment selection based on cost optimization, design efficiency and client requirements
- Developed AutoCAD drawings for HVAC and Plumbing systems

Chicago Bridge and Iron, Gurgaon, India

Mechanical Engineering Intern, May 2016 to August 2016:

- Performed thermal and structural design, using HTRI (design) software for various Shell & Tube Heat Exchanger (SHTE) equipment: Liquid-Liquid SHTE, Condenser and Reboiler
- Conducted thermal simulation of SHTE equipment using alternative FE software such as ANSYS and SolidWorks
- Verified Process & Instrumentation Diagrams for various systems of a combined cycle power plant

Bechtel Corporation, Gurgaon, India

Mechanical Engineering Intern, June 2014 to July 2014:

- Reviewed thermal sub-systems of a captive power plant such as Closed Cooling Water (CCW) System and Nitrogen Gas System
- Performed sizing of critical CCW equipment in accordance with project specifications including pumps, boilers and turbine-generators

Maruti Suzuki, Gurgaon, India

Mechanical Engineering Intern, June 2013 to July 2013:

- Performed design of automobile engine components using SolidWorks: crankshaft, camshaft and piston rod
- Enhanced the performance of the coolant and chip separation system of the input shaft lathe machine