

Jesse Luna

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OBJECTIVE

Mechanical Engineer

SPECIAL SKILLS

SolidWorks/PROE-Mechanica GD&T Stack Expertise, Compressible SuperSonic Flow Graduate Level Fluid Expertise, Vibration FFT MATLAB Signal Analysis, AutoCad, Kinematic Hardening ABAQUS FEA Mesh-Model-HVAC Refrigeration Cycle Expertise, non-Linear problem solving & Strong Analytical skills, Composite/Orthotropic Steel Materials & Shock, Project Mgt, ALGOR weld & bolt eigenvalue-static-thermal, Heating/Cooling Thermal Imagery, SAP & MS Office, Excel Macros, UNIX, C, FORTRAN Executables, Bilingual Speaking Writing, Master Thermal Thesis, Graduate '7 Habits Leadership' Program', Piping design analysis, Audio Engineering Expertise, Missile Flight simulation, Mfg Time Studies, Katrina Survivor, L-Distance Runner.

EDUCATION

May 2000 Master of Science GPA 3.1 Mechanical Engineering Texas A&M University
Cum Laude Bachelor Science GPA 3.6 Mechanical Engineering New Mexico State University
International Exchange Student Monterrey Mexico ITESM

EXPERIENCE

MECHANICAL PUMP SYSTEMS R&D ENGINEER III, Baker Hughes Inc, 2005-current

- Induction Motor/Seal & Centrifugal Pump journal & thrust bearing failure analysis
- Project Value-Add estimates for return on capital plant expenditures
- Project Management including Scope, Objectives, Deliverables, Budget Planning
- Trained/Lead Jr Engineers & Technicians in vibration signal test analysis
- Modal & Auto Power Spectrum Rotating Equipment Tests
- Implementation of Modal & Auto Power Spectrum Rotating Equipment Tests
- Specifications written for impact transient and continuous tests / Uncertainty analysis
- Training in lock-out tag-out procedures and policies
- Analysis of FFT tri-axial vibration pump signals at sub-synchronous (30Hz) & synchronous (60Hz) frequencies via Data Physics Analyzer, MATLAB M-files, and technical report
- Hands on experience with unbalance response, critical frequency, whirl frequency
- Selection of vibration TEDS transducer velocimeter/accelerometer sensitivity
- Training for DyRoBeS/ExcelRotor Rotordynamics at UVA & TAMU
- Structural fatigue analysis with PROE/Mechanica FEA with Inconel
- Thermal non-linear contact analysis with PROE/Mechanica FEA & tech report
- Stellite bearing structural/thermal analysis with PROE/Mechanica & tech report
- Roark's structural curve beam and wide beam analysis
- Animation with PROE/Mechanism on rotating pump machinery
- Hands on manufacturing of pump-seal-motor assembly-teardown
- TK solver thermal model development
- Petroleum geology, logging, contractual, drilling opts., fishing, production, refining training

- Drill & formation evaluation, drill bit and fluids, completion, corrosion, monitoring training

SR MECHANICAL SHIP SYSTEMS R&D ENGINEER, Northrop Grumman Corp, New Orleans, 2002-2005

- Vertical/Horizontal Pump non cavitation design & dry / wet pipe system weight analysis for fuel oil, potable water, fire systems
- Developed ALGOR-ABAQUS FEA Linear-NLinear Structural & Thermal Models
- DDAM Analysis of Low Carbon Steel, Titanium, Composite Material Strength for Ship Structures
- Created MS Excel databases for structural welding analysis
- Designed 1-line piping layouts for firemain protection, fuel-oil systems in AUTOCAD
- Determined pump sizes, head losses, valve connections for piping layouts
- Performed FEA static analysis of quarter million DOF aluminum radar model
- Analyzed structural tube steel for 3 point lift using ABAQUS shell, solid, and truss elements
- Implemented FM200, sprinkler, R102, AFFF, CO2, fire main fire protection systems
- Selected fluid pumps from vendor literature based on system capacity flow requirements

MECHANICAL ENGINEER, Montgomery Co., Dallas, Texas, 1998-2001

- Designed Mechanical Traction Elevators using AutoCad14, MathCAD
- High Structural and Architectural Building Plan Analysis Skills
- Lead Engineer in Design Checking & Bill of Material Traction A/B Process
- Ensuring Product Accuracy / Quality, Beam Design, Load Criteria
- Steel Beam Design w/ Enercalc, Euler Column Design & Analysis
- Trained Engineers in Design and Bill of Material Process using IBM Mainframe Technology
- Managed Timely Contract Closure Mechanical, Electrical, & Fixtures for high efficiency
- Received SAP training for state of the art BOM modernization

RESEARCH ASSISTANT, Texas A&M University, Heat Transfer Lab, CS, TX, 1993-97

- Designed Miniature Turbine Hardware for Modeling in Laboratory Air Flow Experiments
- Executed Convective Heat Transfer Experiments using Thermal Imagery Fortran processes
- Performed High Reynolds Number flow experiments with Tec Plot, MS, Sun Unix, VAX
- Authored dissertation Under University Fellowship: Heat Transfer Measurements in a Two-Pass Square Duct Via A Transient Liquid Crystal Image Method

MFG TEST ENGINEER, IBM Corporation, Austin, TX, 1989-93

- Established AIX test laboratory on RISC 6000 workstations
- Received lab implementation award for test procedures & processes
- Wrote AIX test scripts to verify field return products,
- Designed robotic pick and place mechanical fixtures and pneumatic h/w
- Implemented Ethernet and token ring networks on RISC 6000 workstations
- 6 Sigma training and implementation on PCB workstation build

