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## **BACKGROUND**

### **Technical Design**

- Initiate design concepts, define parameters, perform detail designs. Produce innovative, practical, and inexpensive improvements to existing designs and systems.
- Design, select, and install industrial production machinery and support equipment.
- Complete plant infrastructure projects, including buildings, roads and grounds, and utilities.
- Prepare and interpret practical technical specifications.
- Prepare design and drawings for facilities, equipment, systems, and construction.

### **Project and Construction management**

- Define project scope and deliverables.
- Utilize teams to define, plan, and implement improvements
- Conduct design reviews, obtain practical, useful, and complete information at a reasonable cost.
- Identify and select vendors and subcontractors, evaluate and select best fit equipment and systems, negotiate best price and schedule.
- Prepare cost estimates, track and project cost to complete, control scope changes and extras to maintain project budgets.
- Analyze bids, negotiation and administer contracts.
- Plan, identify tasks and dependencies, prepare, coordinate and control complex project schedules to complete work on time.
- Extensive field experience.
  - Coordinate site work with employees, subcontractors, and the trades and crafts.
  - Supervise fabricators, contractors, direct supervision of crafts and tradespersons.

### **Technical management and supervision**

- Proven supervisory and leadership abilities with over twenty years experience supervising engineers, drafters, technicians, consultants.
- Success at hiring, training, and motivating diverse technical individuals to establish and maintain a productive, innovative, motivated team.

### **Personal**

- Results oriented, reliable, decisive, energetic, self motivated, hard-working.
- Optimistic, enthusiastic, and outgoing personality.
- Work harmoniously with people, and develop and maintain positive, enjoyable, and productive long term relationships and work atmosphere.
- Good written and oral communicator. Adept at Microsoft Office, Word, Excel, and Project.
- Excellent mentor with the ability to lead a wide range of subordinates.
- Dedicated to safety, preserving the environment, energy efficiency.

## Accomplishments

### Design

- Equipment and facility for robotic handling of 5,000 pound parts to 95 inch diameter. Reduced cycle time from 5 to 3 minutes. Sand handling system released 7 tons of sand in 30 seconds.
- Innovative system for spraying molten aluminum on 3000 blocks per day. Materials handling system operated on 6 second cycle.
- Designed and implemented 'quick die change' on wax molding machine to decrease set-up time from 28 to under 3 minutes. Implemented Kanban layout to minimize wax inventories.
- Conceived and implemented innovative materials handling system for in house titanium electrode fabrication/welding.
- Conceived and implemented innovative water recovery system to reduce energy and disposal costs by \$100,000 annually and eliminate process water to storm sewers.
- Concieved wax reclaim system to save \$300,000 in materials costs per year.
- Designed single crystal silicon cut-off saw with auto centering clamp.

### Project Management

- Cost Control
  - Managed 67 construction projects in 1997 to completion; finished 2% below budget.
  - Introduced cost tracking, projections, and control system.
  - Implemented scope definition and change system, improving planning and control.
- Scheduling
  - Analyzed problems and initiated changes on a \$25MM project with a 17-month schedule. Construction completed in 14 months (5 weeks ahead of schedule).
  - Developed/coordinated complex facility expansion/robotic equipment installation schedule. Implemented during production expansion without disruption.

### Construction and Maintenance

- Maintenance engineer: estimated man-hours, prioritized, and scheduled all mechanical work for a 160-person maintenance organization.
- Relief foreman for many years in fab/machine shop, four millwright crews, mobile equipment, plumbing and carpenter crews.
- Completed major robotic production expansion involving multiple consultants, suppliers, and contractors. Scope included building and utility expansions.
- Directed facility modernization/equipment upgrades in 9 production departments, increasing production capacity from 3.8MM to 13.8MM per month.
- Successfully completed multi-year, seven project HVAC and utility modernization.

**Accomplishments (continued)****Technical Management**

- Organized, spearheaded and managed start-up Engineering Department at Oremet: Increased staffing from five to seventeen. Increased capital spending to \$1,000,000 per month rate.
- Developed project priority system to complete essential work on time.
- Implemented weekly commitment/feedback system to improve technical productivity, level and understanding of commitments.
- Initiated design reviews to optimize project designs, improve staff performance.
- Introduced project cost tracking, projections, and control system, improving budgetary compliance.
- Created and implemented engineering procedures manual, producing uniformity and time savings.
- Developed, evaluated, selected and managed primary consultant and contractor for construction programs.
- Conceived, implemented “plant model” spreadsheet for facility and equipment planning, scheduling and justifications to identify needs and facilitate better and more timely decisions.
- Organized and directed pilot project for introducing Japanese production methods; produced 50% of production output requiring 30% of available workers

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## Job History

**Engineering Consulting****July 2001 to Present**

Variety of projects for Engineering consulting firms. Assisting 3 start-up companies.

**Columbia Steel Casting, Portland, Oregon****Mar 2000-July 2001****Plant Engineer**

Project Manager responsible for definition, specifications, designs, installation of machinery.

**Northwest Industrial Contractors****2000****General Superintendent**

Supervised trades/crafts supervisors, safety director on the Westfarms Dairy expansion. Maintained 3-week rolling schedule. Coordinated supplies and tooling.

**Oremet-Wah Chang, Albany, Oregon****1996-1999****Plant Engineering Manager**

Managed 17 person Plant Engineering department. Supervised staff, consultants, interns, and contractors. Prepared and administered annual capital and major maintenance budgets of \$10MM. Prioritized, assigned, and monitored capital and major maintenance projects.

**Precision Castparts Inc., Portland, Oregon****1983-1996****Engineering Program Manager**

Supervised technical staff and outside consultants, vendors, and contractors. Responsible for organizing and implementing facility expansions and upgrades, layouts, services, machinery, and equipment for 11 production departments and 9 support operations. Prepared and administered capital, expense, and engineering department budgets.

**Reynolds Metals Company, Troutdale, Oregon****1968-1983****Maintenance Engineer (1982-1983)**

Scheduled/coordinated major equipment rebuilds. Prepared master schedule for 150 maintenance workers. Estimated all mechanical work. Served as half-time relief foreman.

**Assistant to Engineering Manager (1975-1981)**

Supervised staff of 7-8 engineers and drafters. Managed all mechanical, civil, and chemical design and projects. Prepared/implemented annual capital and expense budgets in excess of \$5MM.

**Project Engineer (1968-1974)**

Performed project and machinery design/installation, supervised drafting pool, coordinated plant energy reduction efforts, and supervised union maintenance trades as a relief foreman.

## Education

Bachelor of Science

Mechanical Engineering

University of Idaho

## Continuing Training

- Project Management & AMA
- Managing Technical Professionals AMA
- Cost Estimating and Control ASCE
- Construction Management PSU
- Demand Flow J<sub>c</sub>-I-T Institute
- Team Building I, II Loram and Assoc.
- Negotiation Roger Dawson
- Supervision, Front Line Leadership Zenger Miller
- STOP Dupont Safety Program

**Projects****Equipment Design and Installation**

Investing robotic work stations	\$2,870,000
Sponge furnace	\$2,100,000
VAR furnace upgrade program	1,500,000
Vertical creep flattener	1,080,000
Wax molding - 4 new machines, new layout	1,600,000
Dewax autoclave - 9 ft diameter	960,000
Mobile titanium grinder	450,000
Redesign and replace hydraulic cylinder on press forge	170,000
Parts framing - relocation, powered rollovers	140,000
Aluminum spray anode coating system	130,000
Molten aluminum filter system	120,000
Titanium electrode facility	85,000

**Piping Systems**

Natural gas plant pipeline	270,000
Renovate Magnesium Plant piping, structural, painting	500,000
Plant boiler	350,000
Bulk liquid storage tanks	115,000
Plant air compressor	115,000
Rotary air compressor facilities	115,000
300-ton rotary chiller, new unit for rebuild cost	87,000
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Liquid urea solution storage/transport	80,000
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Plant fuel oil system	75,000
Acid cleaning tanks	74,000

**Construction**

Westfarms Dairy modernization/expansion	\$8,000,000
Casting building/department expansion	\$1,900,000
Plant reroofing	700,000
Building (9,000 square feet) for chain manufacture	\$320,000
Plant lighting replacement	200,000
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Building expansion for blast machine	72,000
Carbon plant baghouse	80,000
Building expansion, baghouse structure for blast machine	72,000
Baghouse Structure	40,000

**Projects (continued)****Facilities**

Westfarms Dairy modernization/expansion	\$8,000,000
Investing facilities expansion	\$2,870,000
Casting building/department expansion	1,900,000
RMP department upgrade	1,300,000
Plant reroofing program	1,200,000
Plant reproofing	700,000
Wax Reclaim - new facility	375,000
Wax Manufacturing facility	260,000
Wax Assembly/Framing expansion	220,000
Cast house 20 ton crane	115,000
Engineering wax assembly - relocation, new stations	90,000
Wax molding/cleaning expansion	80,000
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Ongoing office expansions/remodels (responsible for 150 offices plant wide)	
Remodel lunch rooms, restrooms, conference rooms	
Upgrade phone system	

**Plant Infrastructure**

Scheduler for 1977 potroom fume control facility	\$24,000,000
Sponge Plant venturi scrubber	1,280,000
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VOC incineration system	1,270,000
Cast house baghouse	1,270,000
Mobile equipment purchases	800,000
Mag venturi scrubber	230,000
Grinder baghouse system	220,000
Investing HVAC System	202,000
Assembly HVAC System	140,000
Rotary air compressor facilities	115,000
Investing baghouse	110,000
Carbon plant baghouse	80,000