
LONGENECKER and ASSOCIATES

Paul W. Sick

EXPERIENCE SUMMARY

Quality assurance expert with experience in operational and regulatory quality assurance, including commercial grade dedication, procurement, manufacturing technology, and manufacturing operations in the nuclear industry.

RELEVANT SKILLS

Thirty-five years diversified experience (Nuclear Fuel, Core Internals, Instrumentation & Controls, Nuclear Detectors) in all aspects of operational quality, regulatory quality (10CFR50 Appendix "B", 10CFR21, 10CFR70, 10CFR71, NQA-1, ANSI N45 Series, ASME Code, NUREG 0800, and ISO9000), procurement, manufacturing technology, and manufacturing operations in the nuclear industry and six years of the same functions in non-nuclear products.

DETAILED EXPERIENCE

GENERAL ELECTRIC / HITACHI NUCLEAR ENERGY LLC

Manager, Nuclear Quality Assurance 06/07 – 01/08 San Jose, Ca.

The new roll of the organization included the responsibility for NQA which has the total quality system responsibility for the GE-NE Business which has high level exposure to senior management; NRC regulators; ASME, ISO 9000, NQA-1 committees; and customers, (i.e., be the quality conscience for the total business). Also, represented GE Nuclear Business at the NQA-1 committee meetings and participated in reviews and discussions of regulation changes. Performed and improved supplier and internal quality audits with emphasis on organizational hand-offs. Instituted new auditing techniques with suppliers and developed internal training for such audits. Reviewed and commented on the Hitachi quality system to be compatible with US requirements.

GENERAL ELECTRIC COMPANY – NUCLEAR BUSINESS

Manager, Nuclear Quality Assurance 01/98 – 06/07 San Jose, Ca.

The new roll of the organization included the responsibility for NQA which has the total quality system responsibility for the GE-NE Business which has high level exposure to senior management; NRC regulators; ASME, ISO 9000, NQA-1 committees; and customers, (i.e., be the quality conscience for the total business). Also, represented GE Nuclear Business at the NQA-1 committee meetings and participated in reviews and discussions of regulation changes. Performed and improved supplier and internal quality audits with emphasis on organizational hand-offs. Instituted new auditing techniques with suppliers and developed internal training for such audits. Responsible for the integrations of the one quality system for the for the Global Nuclear Fuel, LLC business within the GE Nuclear business. Reviewed the GE Nuclear Quality System for compliance with NUREG 0800 and attend the Nuclear Regulatory Information Conference.

Manager, Nuclear Quality Assurance 01/94 – 01/98 Wilmington, NC

The expanded roll of the organization included the responsibility for NQA (see previous assignment below) which has the total quality system responsibility for the GE-NE Business which has high level exposure to senior management; NRC regulators; ASME, ISO 9000, NQA-1 committees; and customers, (i.e., be the quality conscience for the total business). In addition, it maintained the responsibility for Nuclear Energy Production Quality Assurance, which includes Fuel Manufacturing, Services Manufacturing, Purchased Material QA, and Quality at the Source. Also, have Quality responsibility for Fuel Engineering. This assignment has total quality insight into the GE-NE Business. During this assignment, I participated in

Product Design Reviews for which I was awarded two Patents. Also took the leadership role in implementing Quality at the Source and communicated the program to our customers around the world. It was well received and accepted by our customers. Conduct major audits against regulatory and contractual requirements within GE-NE and major suppliers. During 1997 have received compliments from both customers and suppliers on the thoroughness and the professional manner on how the audits were conducted

Manager, Quality Assurance 06/89 – 01/94 Wilmington, NC

Manage the efforts of 50 salaried and 175 hourly employees. The organization structure has 11 direct reports. (Mgr-Services Components Quality Assurance, Mgr-Fuel Components Quality Assurance, Mgr-Fuel Manufacturing Quality Assurance, Mgr-Purchased Material Quality Control, Mgr-Chemical & Metallurgical Labs, Mgr-Quality Audits & Customer Service, Program Manager New Products, Senior Program Manager Quality Computer Systems, Senior Engineer Japan Licensees, Senior Engineer PC Base Systems & Development, and Secretary). Responsibility includes product and process control, customer relations and interface, and design engineering interface. As part of the Marketing interface, QA does contract reviews and project release of manufacturing reviews to assure customer contract compliance. Also, have quality consulting and qualification responsibilities with licensees in Japan, pain, and Italy. Have responsibility for customer presentations as it relates to quality and quality improvement programs. Instituted many programs to address employee awareness to quality. Developed and implemented a PC-based product traceability system and a product loss report that ties the financial system with shop performance. Also, developed a customer concern tracking system that assures closure of customer issues.

Manager, Custom Products 03/88 – 06/89 San Jose, CA

Manage high-level individuals as the previous assignment (see below for details) with added responsibility for cost estimates, product pricing, inventory, customer interface, and profit and loss. Improved contribution margin of product line from 35% to 58% through a detailed analysis of product cost structure, product complexity, documentation requirements and customer perception on value. Product order levels remained approximately the same over this period. Sales volume was in the \$10-12 million range.

Manager, Custom Products 08/84 – 03/88 San Jose, CA

Managed 25 high level individuals in production, quality assurance, engineering, manufacturing engineering, finance, procurement, and contract administrative personnel; to develop vendors and phase out of in-house make. Responsibilities include: Planning, integration and control of the physical cost of materials and orders; provide technical support to vendors through Manufacturing Engineering, Design Engineering, and Quality Information Equipment Engineering; integrate customer requirements with vendor delivery dates. Also, provide technical support to other design engineering groups on producibility for new product introduction and phase in such products in the selected vendors' place of business. Submitted over \$5,000,000 of cost improvements on this assignment. Established a cost system for the Farmout Program that includes Product Cost, Overhead Costs, and Contribution Margins. Also have been appointed to the Product Pricing Board.

Manager, Manufacturing Technology Operation 06/83 – 08/84 San Jose, CA

Managed a workforce of 102 salaried and 55 hourly employees. Responsibilities included those of the previous assignment (see below for details) plus; Computer operation of Hewlett-Packard 3000, systems implementation and analysis, development shop operations, tool cribs, manufacturing administration, and strategic planning. Accomplishments: Introduction of laser welding, bar code technology for stockroom and shop material tracking; implementation of

paperless shop, and material request documentation. Have identified and submitted \$3.2 million in cost improvements and have an operating budget of \$10 million that maintained a \$400,000 positive variance. Special tasks included business consolidation strategy and new business chairperson for manufacturing.

Manager, Manufacturing Engineering 06/80 – 06/83 San Jose, CA

The new role of this organization was to manage a work force of 92 salaried, which included 6 managers and 18 hourly employees. The responsibilities were to direct the manufacturing engineering efforts of shop support and advanced manufacturing components to accomplish successful manufacturing operations in the areas of electrical panel manufacturing, sensors, and mechanical make reactor equipment. Assure that the major Nuclear Controls & Instrumentation Dept. (NC&ID) goals regarding capacity expansion, producibility, and product quality were attained by establishing and implementing suitable planning, programming and control systems. Responsibility also included financial aspects of budgeting, equipment; facility design, tooling support, capital investment, and planning of manufacturing engineering resource applications as required meeting department goals. The position involved frequent interface with other department sections, shop operations, QA, materials, program management and control, and NC&ID design engineering; as well as external contacts such as design engineering, corporate consulting services, Computer Aided Design & Manufacturing (CAD/CAM) council, and customers. Major contributions: Implementation of bill of materials, facility expenses of over \$1 million, equipment upgrade to Numerical Control (N/C) mechanical machining, semi-automatic electronic board & chassis assembly, panel wiring, manufacturing standard improvements, producibility improvements, shop rearrangements, and implementation of MIPLAN/MICLASS group technology, CAD/CAM generated facility layouts. Exceeded cost improvement budgets by \$600,000 to \$800,000 for each year.

Manager, Manufacturing Engineering 08/79 – 06/80 San Jose, CA

Managed 36 exempt and 19 non-exempt personnel with responsibility for determination of goals, plans, and results of the manufacturing engineering organization. Responsible, through efforts of subordinates, for developing process and equipment, which provide Nuclear Controls & Instrumentation Dept. (NC&ID) competitive leadership, and for assuming that such equipment, processes and facilities produce product efficiently at a low cost. Must assure that product designs facilitate use of the most efficient processes and methods, plan required facilities for manufacture and provide technical expertise

Manager, Special Projects & Support 07-77 – 08/79 Wilmington, NC

Manager of 7 exempt, 2 non-exempt and 30 hourly employees to fabricate unique reactor equipment components in accordance with scheduled requirements. Operation included: Small to large machining, complex welding and assembly and simple shop aid tool fabrication as required. Primary product responsibility was the Inclined Fuel Transfer Systems that contained 5600 parts each; and support to other product areas, primarily in machining reactor components. Organizational functional responsibilities included shop operation supervision, manufacturing engineering, producibility engineering and planning, production control, and purchasing. Also gave work direction to quality assurance engineer assigned to area, and worked closely with design engineering. During the first ten months of operation, over \$1.1 million in cost improvements for 24 systems were identified and implemented. All systems were completed on schedule, below cost, and with high quality level.

Manager, Fuel Tubing Mfg. & Tooling 10/73 – 07/77 Wilmington, NC

Manager of eight exempt, 5 non-exempt, and 120 hourly employees. During this period, the shop produced over \$8 million worth of material with a scrap rate of less than 5%. Also during

this time, productivity was increased by 22% and quality was increased by 20% during the second year. During this period, the shop implemented over \$2 million of cost improvements, introduced two new products, and made numerous development runs for future reactor fuel designs. Had the opportunity to act as building manager for a period of four weeks. Implemented an instructors program to assist the shop and promote job enrichment. Maintained union-free status in shop. Was appointed as an active board member for the Foreman's Assessment Center.

Advanced Manufacturing Engineer 08-72 – 10/73 Wilmington, NC

Responsible for new product introduction in Fuel Components Operation (FCO). This included writing appropriation requests, equipment design, ordering, and installation of equipment, process development, and definition. Maintained projects ahead of schedule and under budgeted funds. Main projects were 8x8 spacer and water rod. Was also responsible for interface with Engineering, Quality Assurance, and Quality Engineering. Also had interface with Fuel Manufacturing Operations personnel, purchasing and suppliers. Other responsibilities were: Plant expansion coordinator and plant facility load studies for expansion. Acted as unit manager during my supervisor's absence. Conducted assignments with project manager-type of responsibility. Products were qualified for production ahead of schedule with a 95% yield first time through on their respective runs.

GENERAL ELECTRIC COMPANY – TRANSPORTATION BUSINESS

Manager, Diesel Engine Rebuild 04/71 – 08/72 Grove City, PA

Responsible for the startup of operation. This included interviewing hourly and exempt personnel for hires and identifying labor for work area. It also included equipment debugging and production scheduling within nine months. Brought the business from zero engines per week to three and one-half per week with capacity for five engines per week, thus shipping our one-hundredth engine on the tenth month of operation, ahead of business commitment. Participated in customer visits and joint inspections. The process workflow was composed of engine tear down machine shop areas, and engine and component assembly areas. There were three supervisors, 1 methods and planning person, and 71 direct production employees reporting to me. Through our promotional system, the unit experienced a 65% labor turnover during the past year and maintained a 1% absenteeism record. Monthly update meetings were held with hourly employees thus maintaining a non-union

GENERAL ELECTRIC COMPANY – BATTERY BUSINESS

Quality Process Engineer 07/70 – 04/71 Gainesville, FL

Main responsibilities were to reduce manufacturing losses and improve capabilities. During my tenure, losses were maintained at 2-3% below budget. Also responsible for writing process instructions and rework procedures where applicable. Had four major product lines "AA", "C", "D", and Aircraft Battery product lines.

Advanced Manufacturing Engineer 06/69 – 07/70 Gainesville, FL

Conducted producibility studies of new design techniques and new product introduction. Acted as coordinator between design engineer and manufacturing. Also, worked closely with marketing as to customer requirements. Became involved with nylon molding and molding techniques. Presented a report to update the plant molding facility. Made cost analysis on new products.

GENERAL ELECTRIC COMPANY – MANUFACTURING MGT. PROG.

Production Specialist [Low Voltage Switchgear 01/69 – 06/69 Philadelphia, PA]

Responsible for/and instrumental in establishing and refining production follow-up routines on supply and renewal parts requisition for AC switchgear equipment and for converting information from the Electronic Processing Inventory Control (EPIC) computerized system to the Materials Information and Control System (MIACS). Gained experience in production systems and functions of master scheduling.

Foreman [Medium Voltage Switchgear 06/68 – 01/69 Philadelphia, PA]

Responsible for supervising second shift operations and maintaining shipment schedules for the assembly of Medium Voltage Switchgear during for the first three months of the assignment. During the second three months of the assignment, was the second shift supervisor of the Fabrication Shop that supported the assembly area. This included steel fabrication, bus bar manufacturing, and silver plating. During my tenure, developed a quick order routing system to support emergency needs, arbitrated piecework issues with employees, and improved labor relations with the Union Stewart and employees.

Specialist, Equip. / Facilities [Power Transformer 12/67 – 06/68 Pittsfield, Mass.]

Responsible for facility planning, feasibility studies, evaluation of make versus buy items and for the guidance of technicians, where applicable. Seek, identify, evaluate, and implement opportunities for manufacturing as to contribute to department goals. Took special sessions in methods and work measurement. Main projects initiated were: 1.) equipment rearrangement in the co-supporting area of the insulation area, resulting in an additional 2100 square feet of storage and manufacturing space being made available; 2.) the computerized study for the need of a toroidal winder for current transformers that would realize a savings of \$30,000; and 3.) the evaluation of new adhesives to be used in insulating materials for power and apparatus transformers. Gained experience in appropriation request preparations.

Manufacturing Engineer [Power Transformer 06/67 – 12/67 Pittsfield, Mass.]

Responsible for the selection of equipment and tooling, preparation of specifications, procurement of equipment, and supervision of installation and debugging of it. Instructed methods and time standards personnel through proper integration with different operations, and provide minimum interference with production. Was instrumental in simplifying material handling; in the introduction of a streamlined chemical cleaning process; and in the study of a mechanized silver-plating facility for copper and aluminum.

Quality Process Engineer [Aircraft Engines 12/66 – 06/67 Evendale, Ohio.]

Responsible for process control of J79 Rear Casing manufacturing. Control product rework, repair, and or scrap. Also, was chairperson of the Material Review Board (MRB) Chairman and the interface with US Air Force resident inspector. During my tenure on this assignment, instituted a process of early tooling changes to avoid quality issues. Wrote and implemtd quality planning for J79, TF39, and SST engines.

Specialist, Mfg. Process [Aircraft Engines 06/66 – 12/66 Evendale, Ohio.]

Responsible for auditing manufacturing operations in accordance with the structured business goals and objectives; Inspected industrial reserve and in-house equipment for rehabilitation and/or modernization to be used in the expansion program and acquired quotation for such work. Coordinated efforts to obtain quotations at or below allotted funds. Maintained position of Director of Special Tooling for J79, TF39, and SST engines. Justified the need for an additional \$500,000 in special tooling for both TF39 and SST engines.

DETROIT INSTITUTE OF TECHNOLOGY - Graduated with BSME 06/66

Lab Technician 09/64 – 05/66 Detroit, Michigan

Responsible for installation of new equipment, maintenance, and repair of on-hand equipment; preparation of lab sample material for testing by other students. This included insertion of strain, gages, and hookup of recording devices. Wrote experiment instructions and procedures. Made layout drawings for laboratory expansion and rearrangement

EDUCATION

Detroit Institute of Technology – BS Mechanical Engineering 6/66
General Electric – Manufacturing Management Program 6/69

ADVANCED TRAINING

Management Development Course (MDC) – General Electric
Work-Out – General Electric
Managing Account Potential (MAP) – General Electric
Coping With Inflation – General Electric
Electronic Test Engineering Course – General Electric
Design for Assembly – General Electric
Six Sigma – General Electric
Problem Analysis, Kepner-Tregoe
Tap Root – TapRoot, Inc.
Lead Auditor – J-E-T-S, Inc.

PERSONAL

Read, Write and Speak Spanish fluently
Sea Scouts – Assistant Leader 1957 through 1966
Professionalism Award (MSPE –DIT) - 1965 & 1966
Who's Who in North Carolina – 1973
"Do Right" Award (Operational Trends, General Electric) -1978
"General Manager's Award" (Outstanding Performance, General Electric) - 1984, '85, '86
"Nuclear Business Award" (Outstanding Performance, General Electric) - 1990, '91
Design Patent (General Electric) – 1993
Design Patent (General Electric) – 1994
Green Belt Certification – General Electric - 2001