



Ray Catlett Information

Background:

- Forty+ years in electrical power design (69kV-480V), maintenance technical support and system analysis for petrochemical plants, offshore platforms, power plants, data centers, power utilities, and pulp & paper mills.
- Prepared power system analyses, equipment specifications, standards development, medium voltage motor applications and technical support to operations and maintenance in utility powerplants, refineries and industrial facilities.
- Performed in the roles of design engineer, project manager, corporate technical consultant, and maintenance supervisor.

Focused Areas of Expertise:

- Power System Analysis & Optimization
- Equipment Specification (MV & LV Equipment)
- MV Motor Applications
- Electrical Power System Design

Past Relevant Working Experience: ABB, Shell, Brown & Root

- Provided alternate proposals to marketing/packaging groups; performed technology assessment relative to system re-configuration and/or optimization; marketing efforts. Provided technical support to field technicians, customers, and sales/marketing channels. Project management including equipment specification, project financials and activities tracking.
- Electrical power system design and analysis for industrial facilities, including equipment specification, computer assisted analyses, and estimating.
- Third party consultant to a large chemical firm and new 115KV - 23KV substation, located in Thailand. Analysis, design, control, specification, and field commissioning of (4)-9000HP, 2-speed, induction motor drives for an induced draft fan application in a coal fired utility power plant. Technical feasibility study of induced draft fan prime driver types.
- Electrical technical support to three strategic business units. Developed long range and short-term contingency plans (team effort). Provided technical support to field electricians and operations, training of crafts, operators, technicians. Supervised, provided performance appraisals and salary administration of technicians and electrical engineers. Responsible for QA/QC for a \$250 million plant expansion.

- Project design of electrical power distribution up to 15KV; performed power system analysis and technical support to all business divisions; equipment procurement specifications, motor acceleration and power system impact studies.

Key Skills

Integrity, Responsible, Technical problem solving, People oriented, Organization, Initiative, results oriented, Driven by Customer Satisfaction, Teamwork

Languages

English

Certifications & Courses

- Ranken Technical Institute, St. Louis, Missouri, Industrial Electronics Certificate
- BS Electrical Engineering, University of Missouri-Rolla
- Washington University, St. Louis, Missouri. Masters in Engineering Management
- Registered Professional Engineer, States of Texas (in-active) and Missouri
- Institute of Electrical and Electronics Engineers (IEEE) – Life Senior Member
- 1993 IEEE/IAS/PCIC Conference, Local Committee Member
- 1998 IEEE/IAS International Conference, General Chair
- Inducted into the Academy of Electrical and Computer Engineering, MO University of Science and Technology.

Co-authored and presented the following IEEE, peer-reviewed, technical papers:

- "A Case Study of Replacing Steam Turbines with LCI Type Variable Speed Drives" at the IEEE/IAS/PCIC conference, September 1989. This technical paper won third place position. Published in the IEEE/IAS Transactions Nov/Dec 1990.
- "Customer Advantages of Three Cycle Breaker Applications" at the IEEE/IAS/PCIC conference, September 2003. Published in the IEEE/IAS Magazine Sept/Oct 2005.
- "MV System Design: A Paradigm Shift" at the IEEE/IAS/PCIC conference September 2010.
- "Improving Relay Protection Levels in Medium Voltage Switchgear" at the IEEE/IAS/PCIC conference September 2012; published in the IEEE/IAS Transactions, May/June 2014.
- "Reducing Tripping Times in Medium Voltage Switchgear" at the TAMU protective relay conference, April 2013.
- "Novel Approach to Arc Flash Mitigation for Low Voltage Equipment" at the IEEE/IAS/ESW conference, Feb 2016, published in the IEEE/IAS Transactions, Nov/Dec 2016.
- "Considerations for the Application of a MV High Speed Grounding Switch for Arc Flash Mitigation of LV Equipment" at the IEEE/IAS/PPFIC, June 2016, won 2nd place award, published in the IEEE/IAS Transactions, March/April 2017.
- "Optimization of MV Distribution System Designs" at the IEEE/IAS/PPFIC, June 2017, published in the IEEE/IAS Transactions Jan/Feb 2018.
- "MV Motor Optimization" at the IEEE/IAS/PCIC conference September 2018.
- "Technology Change Management, Assessment, and Organizational Behavior" at the IEEE/IAS/PCIC conference September 2018.