

# Rick Stockum

147 Longview Dr

Wadsworth, Ohio 44281

330-336-3842 | frsconsulting.biz | [frs@rstockum.ipage.com](mailto:frs@rstockum.ipage.com)

## OBJECTIVE

My final career goal is to introduce a new way to measure electrical currents over the frequency range from DC to 100 kHz. This covers the currents that power system conductors and equipment such as circuit breakers and transformers must carry. This new technology was developed to overcome the short comings of current transformers.

---

## PROFESSIONAL

## ACHIEVEMENTS

### MAJOR ACCOMPLISHMENTS:

From 1998 to 2003, I worked for a power utility where I was involved with installation of electrical power generators in several locations and installation of electrical equipment in a large chemical plant. Earlier experience with an electrical manufacture included laboratory testing and electrical product development.

In my most recent assignment, I worked on the installation and operation of 30 kW microturbines in a distributed generation (DG) program. This included preparation of electrical diagrams and specifications, development of data acquisitions systems, installation supervision, and field-testing.

In another assignment, I worked on the installation of a 15 MVA turbine generator where I directed the testing and refurbishing of many of the components including the non-linear voltage regulator and static exciter. I was responsible for most of the electrical drawings and specifications required in the installation.

In a third assignment, I was one of the principal electrical engineers in the construction of a \$37M chemical plant. Many motors with variable frequency drives (VFD) and computer (DCS) controls were used. In the same project, I was the electrical engineer in charge of the installation of a 1-mile long conveyor using three synchronized drives under PLC control.

For 5 years, I was the manager of a manufacturer's test laboratory that conducted electrical, mechanical and thermal tests on equipment such as transformers, switches, cables, cable terminals, transmission line insulators and substation surge protection equipment.

From 1960 until 1993 I was a development engineer on electrical power equipment including MOV arresters, transformer and circuit breaker bushings and high voltage cable terminations. My accomplishments over this period include design of cable terminations with voltage ratings up to 800-kV. I participated in industry research projects on underground cable systems at Cornell University, Ithaca NY and Waltz Mills PA.

I did extensive testing on polymer insulation materials for outdoor arresters that produced the first polymer housed distribution arrester. I authored or coauthored IEEE papers on these projects and I also wrote an IEEE paper published in 1994 on the simulation of heat transfer in large MOV arresters.

---

---

**SKILLS**

Electrical Equipment and Instrument Design  
Electrical Tests and Measurements  
Mathematical Modeling and Simulations  
Data Acquisition Design and Installation

---

**WORK HISTORY****EXPERIENCE (11/98 - 4/03):****FirstEnergy, Stow, OH****Contract Electrical Engineer**

Major assignments included installation of natural gas powered microturbine generators at several locations, installation of a rebuilt steam powered turbine generator at a municipal power plant and installation of the electrical equipment including three conveyors at a large chemical plant.

On site tests and studies were frequently required to determine the feasibility of proposed microturbine installations at various facilities including a school, office buildings, and a gasoline transfer station. Examples of the tests include measurement of inrush currents in motors and transformers and facility load profile studies. Most of the installations employed measuring instruments such as watt-var meters, flow meters, thermocouples, current transformers, potential transformers, etc connected to data acquisitions systems (DAQ) to provide information for evaluation of this emerging technology. I specified all of the DAQ components and wrote the software for running the data loggers.

The steam turbine generator project required extensive testing at a repair facility to determine if the control system voltage regulator and exciter components could be reconditioned or replaced to avoid buying an expensive upgraded control system. Some of the original control circuits had to be reengineered because components were missing and the original design information was unavailable. During the installation, many tests were made to insure critical polarity and phasing connections were correct. The startup was completed without incident and the generator has been running since August 2000.

Two pocket type conveyors and one twin-screw conveyor were installed at the chemical plant. One of the pocket conveyors was a mile in length and required three synchronized VFD drives spaced along the length to develop sufficient power and torque to carry the rated load of 80 tons per hour. Innovative and unique scales on the pocket scales required extensive tests, calibrations, and redesign before they were accurate and reliable. This required extensive outdoor work sometimes in inclement weather.

**EXPERIENCE (09/93 - 09/98):****Hubbell/Ohio Brass, Wadsworth, OH****Manager, Test Laboratory**

Managed a test laboratory that performed high voltage and high-current withstand and flashover tests on electrical power equipment. The products tested had voltage ratings as high as 500-kV and required tests at voltages up to 4,000-kV and currents up to 100-kA. I introduced computer controlled measuring systems and data acquisition systems using National Instruments hardware and software. Supervise the work of four electrical

---

---

technicians and one machinist.

**EXPERIENCE (03/68 - 09/93):**

**Hubbell/Ohio Brass, Wadsworth, OH**

**Senior Development Engineer**

Principle Engineer on High Voltage Cable Terminations and High Voltage Bushings for transformers and circuit breakers. Supervised the work of one engineer and one technician. Designed the products and wrote manuals for their installation and operation.

**Experience (06/60 - 03/68):**

**Ohio Brass, Barberton & Wadsworth, OH**

**Development Engineer**

Principle Engineer on High Voltage Cable Terminations and High Voltage Bushings for transformers and circuit breakers. Supervised the work of one engineer and one technician. Designed the products and wrote manuals for their installation and operation.

---

**EDUCATION**

**MS IN STATISTICS:**

UNIVERSITY OF AKRON, GPA: 3.57, AKRON OH (1987)

**BEE in Electrical Engineering (Power Option):**

The Ohio State University, GPA: 3.6 (cum laude), Columbus OH (1960).

**Honors & Societies:**

Tau Beta Pi, IEEE Life Senior Member, Licensed Professional Engineer in the state of Ohio,

---