

# ANDREW P CLARK, PE

PRESIDENT

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Andy founded ATS in 1986 and is the senior design engineer at ATS / Third Millennium Engineering. His broad range of experience and education enable him to effectively manage technically demanding, multi-disciplinary projects. His hands-on engineering style and steadfast adherence to quality principles have been instrumental in developing ATS' hallmark qualities of craftsmanship, responsibility, innovation, and responsiveness.

- Responsibilities:**
- Provide project management, estimating, bidding, scheduling, and expediting.
  - Direct engineering performed by ATS and Third Millennium Engineering.
  - Provide process, nuclear, structural, mechanical, and electrical engineering and design.
  - Provide prototype concept, design, fabrication, and validation.
  - Direct research and development.
  - Design, implement, and supervise product qualification tests.
  - Author test plans, procedures, specifications, manuals, reports, and commercial dedication instructions.
  - Provide customer consulting and contract professional services as required.

**Professional Experience:**

**Assurance Technical Services Inc.**

President: 1999 – present

General Manager: 1986 – present

- Designed and managed manufacturing of Class 1E (nuclear safety grade) sensors and associated hardware and software.
- Designed, documented, and implemented 10CFR50B (US NRC) / NQA-1 (ASME) quality assurance system. System was rigorously inspected by NRC in 2013 with no findings. [nrc.gov/docs/ML1332/ML13322B348.pdf](http://nrc.gov/docs/ML1332/ML13322B348.pdf)
- Designed, installed, validated, and commissioned ATS' harsh environment test laboratory with technical capabilities up to and including the Westinghouse AP1000 Zone 1 specification that includes an 820 F°/second initial ramp for test specimens up to large valve actuators.
- Designed, installed, validated, and commissioned ATS' high temperature and pressure level sensor test system with technical capabilities up to 2400 psig at 650 °F including controlled rapid rise and fall of phase boundary.
- Designed and managed building construction including reinforced concrete and structural steel.
- Performed software verification and validation.



**Professional Experience:**

**Assurance Technical Services Inc. (continued)**

- Provided analysis and specification of harsh environment qualification criteria.
- Managed qualification testing of harsh environment equipment and components.
- Managed dedication of Commercial Grade items for Nuclear Safety applications.
- Designed, installed, and validated laboratory automation systems.
- Maintained and improved real-time data acquisition software.
- Implemented an NQA1 compliant metrology laboratory.
- Designed and managed Equipment Qualification programs per IEEE 323, IEC 60780, RCC-E, and ASTM D-3911
- Managed identification, analysis, and correction of indirect radiation damage mechanism.
- Performed failure analysis of instrumentation systems.
- Authored procedures, reports, manuals, and instructions.
- Designed, fabricated, and validated automated test stations.
- Designed, fabricated, and validated nuclear reactor experimental fixtures and equipment.
- Designed, fabricated, installed, and supervised commissioning of Cobalt-60 irradiator.
- Designed, fabricated, and validated test system for HF contaminated safety and relief valves.
- Designed, manufactured, and validated research reactor control rod drive system based on 2-phase synchronous operation of stepper motors.
- Designed, installed, validated, and supervised commissioning of research nuclear reactor cooling system.
- Designed, fabricated, validated, and supervised commissioning of novel automotive production tooling.
- Designed, prototyped, fabricated, validated, and operated portable test equipment.
- Designed, fabricated, and validated precision mixed signal instrumentation circuits.
- Designed, fabricated, and validated smart sensor circuits.
- Managed testing of nuclear propulsion components.
- Discovered defect then designed and implemented repairs/modifications to nuclear fuel elements in a research reactor.
- Designed, fabricated, and validated custom electronic test and burn-in equipment.
- Designed press and tooling for classic automobile part manufacturing.
- Designed, fabricated, validated, and supervised commissioning of valve test systems.
- Managed performance testing of prototype steam turbine.



**Professional Experience:**

**Assurance Technical Services Inc.** (continued)

- Provided analysis, repair, and improvement of existing process and manufacturing systems.
- Prepared nuclear power plant instruction manuals and tests.
- Designed and fabricated prototype novel electroplating cell.
- Designed, fabricated, and supervised commissioning of wood fiber molding tooling.
- Performed analysis and laboratory validation of critical flow phenomena.
- Performed analysis and laboratory validation of multi-phase, multi-component transient heat transfer.
- Designed, fabricated, validated, and operated high temperature (~750 °C / ~1400 °F) experimental steam superheater.
- Designed and directed design validation testing of industrial equipment.

**Franklin Software Corp.**

Senior Software Engineer: 1986 – 1987

- Designed, coded, and validated real-time data acquisition software: Data Sentry™.

**The Ohio State University**

Research & Teaching Assistant: 1982 – 1986

- Designed and implemented upgrades of environmental test facilities.
- Provided analysis and specification of harsh environment qualification criteria.
- Performed qualification testing of harsh environment equipment and components.
- Managed staff and participated in novel heat pump research.
- Authored test procedures and reports.
- Instructed senior mechanical engineering laboratory classes.

**Professional Registration:**

- Ohio Professional Engineer, E52725, 1989

**Education:**

**The Ohio State University**

- Graduate level (MS coursework complete) in Nuclear Engineering (Thermal Science)
- Graduate level (MS coursework complete) in Civil Engineering (Construction Project Management)

**University of Cincinnati**

- BS in Nuclear Engineering
- BS in Civil Engineering (Structural)