

Critical Links: Strengthening the Nuclear Supply Chain

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Why the Nuclear Supply Chain Matters

Supply Chain Importance

A resilient and qualified nuclear supply chain ensures safe deployment and lasting operation of advanced reactors.

Complex Components and Standards

Advanced reactors require specialized materials and components manufactured to exacting safety and quality standards.

Stakeholder Collaboration

Industry and regulators work together to promote quality, safety, and communication within the nuclear supply chain.

Standards and Certification Support

Standards and certification programs underpin global nuclear supply chain safety and reliability.



ASME Standards and Their Importance

Foundation of Safety and Performance

ASME Standards ensure nuclear industry designs and operations meet strict safety and performance benchmarks worldwide.

Global Regulatory Integration

These standards are integrated within regulatory frameworks, providing a common technical language for engineers and inspectors globally.

Innovation and Adaptation

ASME Standards evolve with new materials and methods, supporting risk-informed, performance-based, and innovative technologies.

Consensus-Driven Development

Developed by international experts, ASME Standards reflect real-world experience for comprehensive, practical guidelines.

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ASME Certification: Ensuring Confidence



Rigorous Quality Verification

ASME certification involves thorough audits verifying compliance with quality systems and documented procedures.

Building Trust and Compliance

Certification strengthens trust among regulators and purchasers by demonstrating consistent adherence to standards.

Enhancing Safety and Reliability

ASME certification ensures manufacturing meets high safety and performance standards, reducing project delays.

Streamlined Supplier Assessment

Certification reduces redundant oversight and clarifies supplier capabilities for better regulatory assessment.

Tier 2, Tier 3, and Balance-of-Plant Challenges

Supply Chain Capacity Challenges

Tier 2 and Tier 3 suppliers face challenges due to limited nuclear quality experience, impacting supply chain expansion.

Quality Assurance Barriers

Extensive documentation and inspection requirements deter capable suppliers from entering the nuclear market.

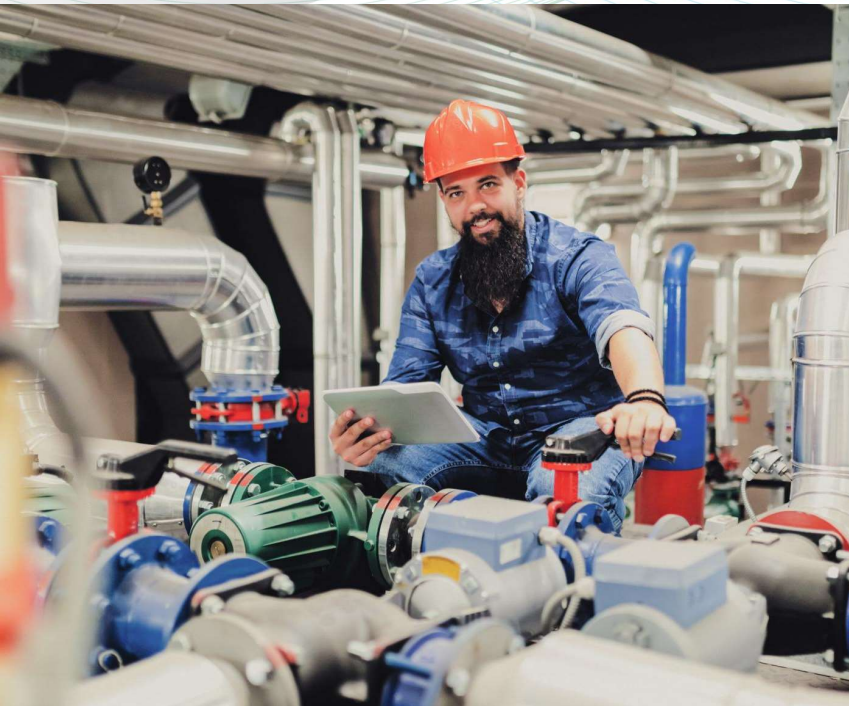
Supplier Base Reduction

Decades of reduced nuclear manufacturing have decreased qualified suppliers, creating vulnerabilities in key sectors.

Flexible Pathways and Programs

Programs like ASME's QPS enable structured progression to nuclear-grade standards, diversifying supply chains safely.





How QPS Strengthens the Supply Chain

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Structured Quality Entry

QPS sets essential auditable quality requirements for new suppliers entering the nuclear supply chain.

Core Quality Principles

QPS instills documentation control, process consistency, personnel competence, and ongoing improvement.

Risk-Informed Graded Approach

Ensures foundational quality where most critical, supporting regulatory strategies for safety and compliance.

Supply Chain Strengthening

Broadens the pool of qualified suppliers, reduces bottlenecks, and enhances quality assurance through annual audits.



ASME Learning & Development

Comprehensive Training Coverage

Programs cover BPVC, NQA-1, and lifecycle standards to equip engineers with critical nuclear knowledge.

Flexible Learning Formats

Training is delivered online, in-person, and in teams to maximize accessibility for diverse supplier organizations.

Workforce Competency Importance

Ongoing education ensures consistent understanding, safety, and quality across the nuclear supply chain.



Collaboration for a Safer Tomorrow

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Global Collaboration Importance

Collaboration among regulators, industry, and standards bodies ensures a resilient and integrated nuclear supply chain.

ASME's Role in Standards

ASME bridges regulatory intent and implementation through clear, adaptable standards and certification systems worldwide.

Commitment to Safety and Innovation

Efforts like QPS and training programs promote innovation while safeguarding quality and safety in nuclear technology.

Future Readiness

Investing in supplier qualifications and alignment ensures the safe, efficient deployment of advanced reactors to meet future energy needs.



Thank you!