PRIME ENGINEERING

Prime Engineering delivers high-quality engineering design and analysis services to the Advanced Nuclear Industry.

We help reactor developers and technology innovators transform complex concepts into manufacturable, ASME code-compliant systems that meet the highest safety and regulatory standards. From early-stage design through detailed analysis and documentation, we provide practical engineering solutions that accelerate deployment of high temperature advanced nuclear systems and structures

Core Capabilities

- High Temperature Design and Analysis
- Pressure Vessel & Piping Design
- Structural Design & Analysis
- Conceptual & Detailed Mechanical Design
- ASME Section III & VIII Code Design Support
- Structural FEA (Static & Dynamic)
- Thermal & Transient Analysis
- Computational Fluid Dynamics (CFD)
- Fatigue & Seismic Evaluation
- Molten Salt / Liquid Metal Systems Engineering
- Nuclear Quality & Safety Documentation
- Aid companies acquiring ASME N-Stamps
- Demonstration Projects for ASME N-Stamps
- Creep & Fatigue Evaluation

Code Competency

BPVC

- Section III Division 1, 2
- Section III Division 1.NF (Structures)
- Section III Division 5 (High Temperature)
- Section III NCA Division 2,3,5
- Section VIII Division 1,2

Piping

- Section III Division 1
- Section III Division 5
- ASME B31.1
- ASME B31.3

Structural

- AISC 360, 370
- BPVC Section III Subsection NF
- AISC N690
- ASCE 7, ASCE 4
- ASME NOG-1, NUM-1

Industry Focus

- Advanced Nuclear Reactor Developers
- Test Loops & Experimental Facilities
- Demonstration & FOAK Projects

Engineering Tools & Platforms

- ANSYS Mechanical
- ANSYS HPC +128 Cores
- ANSYS Fluent
- AutoPipe Nuclear
- STAAD.Pro
- MathCAD
- SolidWorks

Business Numbers

UEI – N9GPFGD74J47
NIACS – 541330
CAGE – 8TXW4
Small Business
HUBZone

Contact Prime Engineering

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