



## APPLICATIONS:

- ASME NQA-1-2012 Subpart 3.2-214 Commercial Grade Dedication (CGD).
- NRC requirements, 10 CFR Part 50 App. B.
- NRC requirements, 10 CFR Part 21.
- Static and dynamic analysis.
- Intuitive analysis model creation.
- Cutting-edge graphics.
- Design tools and wizards.
- Load and view plant model.
- Comprehensive error checking.
- User-definable reports.
- Wind and wave analysis.
- Seismic and support settlement analysis.
- International piping codes.
- Extensive material databases.
- Steel databases and modeling.
- Expansion joint databases.
- Hanger databases.
- Hanger design.
- Automated stress iso creation.
- Links to Intergraph CADWorx Plant.
- Links to Intergraph Smart™ 3D.

## CAESAR II® NUCLEAR

### Pipe Stress Analysis for the Nuclear Industry

#### CAESAR II – World Leader in Pipe Stress Analysis

CAESAR II® is the world's most respected tool for pipe stress analysis. Used by more O/Os and EPCs, it is the solution against which all others are measured. CAESAR II offers more than 34 international piping codes and is known for its technical superiority, flexibility, ease of use, innovation, and reliability. CAESAR II now complies with ASME NQA-1 2008/09 quality assurance (QA).

#### CAESAR II Nuclear – Building on a Proven Track Record

CAESAR II Nuclear is a unique solution that leverages the power and quality that CAESAR II has built on for nearly 30 years. CAESAR II Nuclear complies with ASME NQA-1 2008/09 QA standards required for nuclear facility design as endorsed by the Nuclear Regulatory Commission (NRC). This new software solution boasts additional features over CAESAR II, allowing for direct adoption in the nuclear sector for both new and existing facilities.

#### ASME Nuclear Quality and Assurance

To ensure the total quality and integrity of CAESAR II Nuclear as required by the ASME NQA-1, Intergraph® conducted hundreds of automated numerical, usability, and workflow tests. During development, all steps have test plans which incorporate multiple review levels to ensure a robust and high-quality industry solution.

#### Commercial Grade Dedication

The Commercial Grade Dedication (CGD) acceptance process, as outlined in ASME NQA-1-2012 Subpart 3.2-214, includes detailed verification of results using alternate calculation tools and verification tests such as the NRC benchmarks. These results and comparisons are published in a CGD Guide to document the software's accuracy. The CGD technical verification guide is also separately available for CAESAR II Nuclear users.

#### Quality Assurance and Reporting

CAESAR II Nuclear users in the U.S. can access QA reporting to keep them fully informed about issues and software changes helping them comply with U.S. federal requirements 10 CFR Part 50 App. B. and 10 CFR Part 21.

#### Quality You Can Trust

Following higher QA standards has improved the overall quality of the CAESAR II products as a whole. Both CAESAR II and CAESAR II Nuclear users can enjoy increased

confidence in a tool that has delivered reliable results for three decades.

## Links to Design

CAESAR II solutions offer many time-saving interfaces, such as bi-directional links between plant design and engineering analysis. These links between Intergraph Smart 3D and Intergraph CADWorx® Plant Professional enable the transfer of design and analysis data between design and analysis without data loss.

## Links to Third-party Analysis Solutions

CAESAR II also connects to third-party analysis tools, which helps leverage specialized analysis results to and from CAESAR II. These links range from direct interface links to finite element and hydraulic analysis, to links to other systems through the CAESAR II published neutral file or Intergraph PCF file format.

## Capabilities and Standards

CAESAR II Nuclear addresses the needs of the nuclear industry by adhering to various nuclear standards and procedures. This helps ensure that the program delivers the required quality this challenging sector demands.

- The software is commercially dedicated using the new ASME NQA-1-2012 Subpart 3.2-214 Commercial Grade Dedication (CGD) acceptance process for software. This assures the product has passed critical acceptance tests, analyses, and inspections, as well as performance requirements, characteristics, and vendor history.
- Support is offered for U.S. NRC requirements, 10 CFR Part 50 App. B (Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants) and 10 CFR Part 21 (Reporting of Defects and Noncompliance).
- For U.S. customers, a Quality Assurance and Reporting notification service is included.

- The solution offers a design and input verification tool, CAESAR II QATest, for comparing benchmark output with the output generated for an installation. This enables users to satisfy their installation requirements.
- Enhanced, critical-level technical support is included for nuclear licensees.

## Technical Specifications

- Microsoft® Windows®-compatible.

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## ABOUT INTERGRAPH

Intergraph helps the world work smarter. The company's software and solutions improve the lives of millions of people through better facilities, safer communities and more reliable operations.

Intergraph Process, Power & Marine (PP&M) is the world's leading provider of enterprise engineering software enabling smarter design and operation of plants, ships and offshore facilities. Intergraph Security, Government & Infrastructure (SG&I) is the leader in smart solutions for emergency response, utilities, transportation and other global challenges. For more information, visit [www.intergraph.com](http://www.intergraph.com).

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