



SDC Verifier for SMR Balance-of-Plant

Fast, traceable structural code-checking in the structural design and analysis software SDC Verifier or inside Ansys, Femap, and Simcenter 3D.

[Start Free Trial](#)

[Book a Technical Demo](#)

Turn existing FEA into certification-ready evidence — no re-modeling. Or start from zero: create geometry, midsurfaces, and meshes directly in SDC Verifier, then verify with full traceability and export an audit-ready report in minutes.

Where it helps in SMR projects



Main Steel Structure

Complete primary/secondary frames for reactor-adjacent and auxiliary buildings: turbine, control, service.



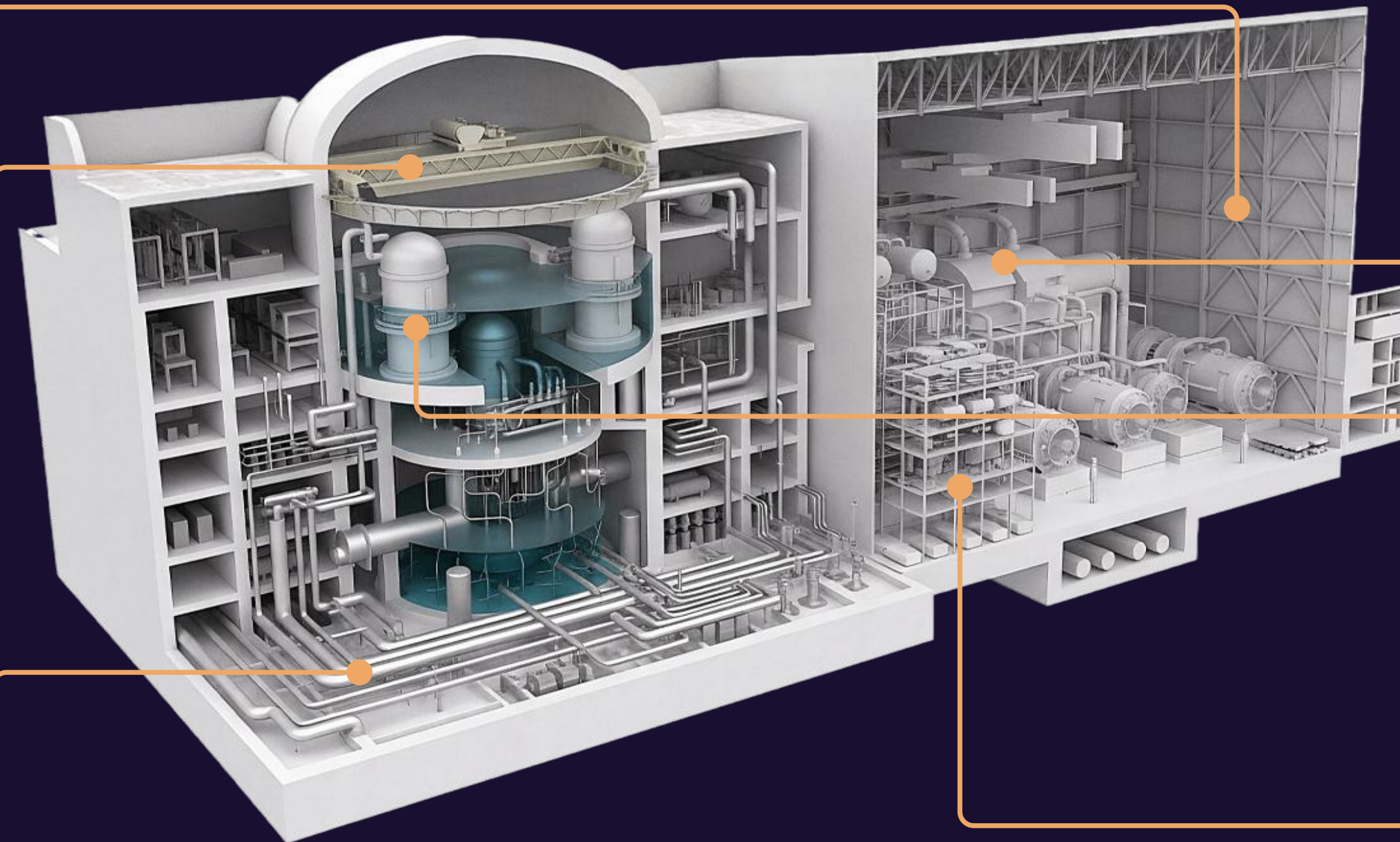
Crane Systems

Crane runway beams & columns; overhead cranes and monorails with EN 13001-3-1 Weld Strength & Fatigue.



Pipe Systems

Pipe racks and pipe bridges (supporting steel); ASME B31.8 (2018) piping checks for selected chapters.



Equipment Skids

Heat-exchangers, pumps, compressors and transport/lifting frames; seismic restraints & baseplates/bolt groups.



Pressure Vessels

Pressure-vessel saddles/supports; rectangular plated tanks, pits, and sumps; ASME VIII Div.2 (2010) fatigue.



Access Systems

Platforms, walkways, stairs, access and shielding support frames; HVAC & cable-tray support steel.

What you can verify — out of the box

✓ Steel Verification

EN 1993 (Eurocode 3), AISC 360, AS 4100 and BS 7608 for cross-section & member resistance, stability, and serviceability.

✓ Crane Structure

Runway girders/columns verified to EC3/AISC; EN 13001/FEM 1.001 for full crane verification.

✓ Plate & Stiffeners

EN 1993-1-5 plate & stiffener buckling — Panel Finder auto-detects plates/stiffeners and runs the checks.

✓ Pipeline Systems

ASME B31.8 (2018) gas pipeline with SIFs and stress analysis.

✓ Connections & Joints

Weld and bolt strength & fatigue (EN 1993-1-9/DNV RP-C203/BS 7608) with EC3/AISC conventions; connection/joint checks (plate & tubular).

✓ Pressure Vessels

ASME VIII Div 2 (2010) fatigue assessment for pressure-vessel components.

✓ Tubular Systems

Tubular members & joints → API RP-2A/ISO 19902. Racks/trusses → EC3/AISC members + EN 1993-1-8 welded joints

✓ Custom Rules

Rule/Formula Editor for plant-specific checks and selected KTA 2201/ASME III clauses.

How it works — 5 steps

1

Import

Bring your model & results from your existing FEA (e.g., Ansys, Simcenter 3D, Femap) into SDC Verifier — or build from scratch in our software.

2

Organize

Recognize members, plates/stiffeners, joints/connections, welds/bolts - auto-group into verification sets with Recognition tools, simplify operations with Rule Based Selector.

3

Combine

Create ULS/SLS and SSE/OBE sets; envelope static/spectral/transient cases with documented factors.

5

Report

Export certification-grade docs with clause references, factors, materials, pass/fail tables & figures.

4

Verify

Stress, buckling, serviceability, connections/joints, welds, bolts, fatigue; find worst cases with our powerful automated tools

Why teams pick SDC Verifier



Faster Approvals

Clause-referenced, factor-documented reports shorten review cycles with owners and auditors.



Lower Delivery Risk

Standardized verification replaces ad-hoc spreadsheets; full traceability reduces rework and errors.



No Re-work Cost

Use existing models/results or build in SDC Verifier — no duplicate modeling or custom scripts.



Scales Across Projects

One repeatable method across sites and contractors with reusable load sets and report templates.

Integrations



Ansys Mechanical



Simcenter 3D



Femap (NX Nastran)

LS-DYNA result reading in Ansys supported

Get started with SDC Verifier today

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