SDC VERIFIER

SDC Verifier for Railway — Trains & Coaches

Automated structural verification for rail vehicle structures and components — using your existing FEA results or models built in the SDC Verifier software or from Ansys, Femap, and Simcenter 3D.

Start Free Trial

Book a Technical Demo

Where it helps in rail projects

Equipment supports

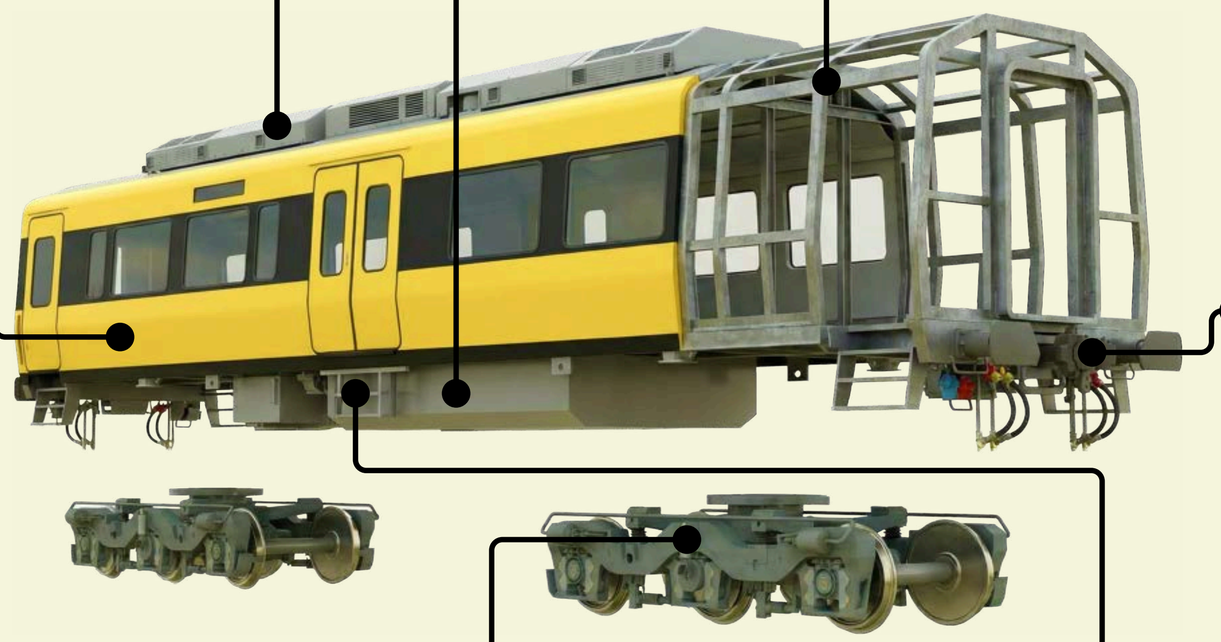
HVAC, cabinets, battery boxes, piping supports

Carbody & underframe

Primary members, brackets, local reinforcements

Bogie frame & attachments

Welded nodes and fatigue-critical regions



Welded fabrication details

Screening + governing detail list for review and sign-off

Load introduction areas

Coupler and mounting interfaces (local checks)

Access & interior supports

Stairs, platforms, secondary steelwork

What you can verify

- **Weld strength & fatigue**
  pass/fail per detail, governing load case, with optional optimization loops
- **Steel members**
  resistance, stability, utilization (Eurocode 3; also DVS / FKM where used in rail projects)
- **Bolts / preloaded joints**
  bolt group verification (VDI 2230 + EC3 bolts; AISC where applicable)
- **Fatigue**
  member and weld fatigue with rail standards (DVS) where applicable; supports stress history workflows including hot-spot and rainflow-based damage evaluation
- **Deflection / serviceability**
  Absolute limits and ratio checks
- **Connections / joints**
  organize, verify, and report connection-level results (welded and bolted)

How it works

1. **Import**
   Bring geometry + results from FEA (or build in the software)
2. **Recognize & Organize**
   Detect members/welds/joints; group verification sets
3. **Combine**
   Build load combinations and envelopes consistently
4. **Verify**
   run checks; identify governing load cases and governing details
5. **Report**
   Export a PDF with plots/tables, pass/fail, and standard references

Standards supported (Railway focus)

Railway fabrication

- DVS 1612 (2014)
- DVS 1608 (2010)

Mechanical components

- FKM 6th, 2012
- FKM 5th, 2003

Bolted joints

- VDI 2230 (Part 1, 2015)

Also used across projects:

- Eurocode 3 Weld Strength (EN 1993-1-8, 2005)
- Eurocode 3 Welds 1D (EN 1993-1-8, 2005)
- Eurocode 3 Members (EN1993-1-1, 2005)
- Eurocode 3 Fatigue (EN 1993-1-9, 2005)
- Eurocode 3 Bolts (EN 1993-1-8, 2005)

Why teams pick SDC Verifier

Cut Lead Time

Less manual sorting and checking; faster reviews

Protect Margins

Fewer spreadsheet handoffs and rework loops

Defend Sign-off

Governing lists + clear standard references

Scales Across Projects

Reusable load sets and report templates

FEA Integrations

Ansys Mechanical

Simcenter 3D

Femap (NX Nastran)

LS-DYNA result reading in Ansys supported

Supported Geometry

STEP

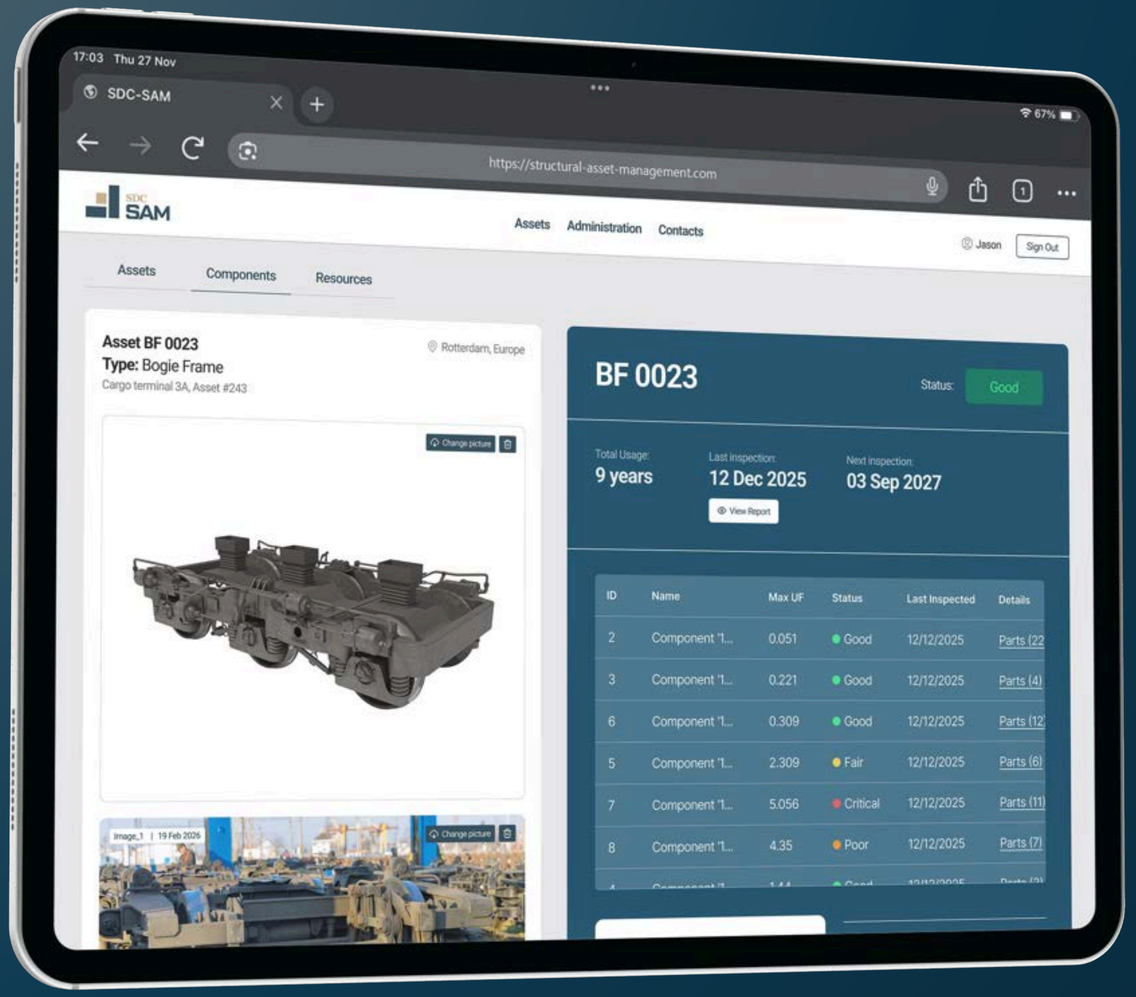
IGES

Parasolid
(.x_t / .x_b)

SDC SAM

Web-Based Solution for
Structural Asset Management

Visit SAM page



SDC SAM provides a digital representation of a rail vehicle structure to support better decisions for inspection planning and repair work.

The tool gives engineering and maintenance teams a clearer view of structural condition across components and service life.

- Detailed FEA Results
- Inspection Details
- Digital Twins
- Usage & Damage History
- Health Status Monitoring
- Location
- Photos

Get started with SDC Verifier today

See it on your model

Start Free Trial | Book a Technical Demo

SDC VERIFIER

sdcverifier.com

info@sdcverifier.com

+31 2336 99 036