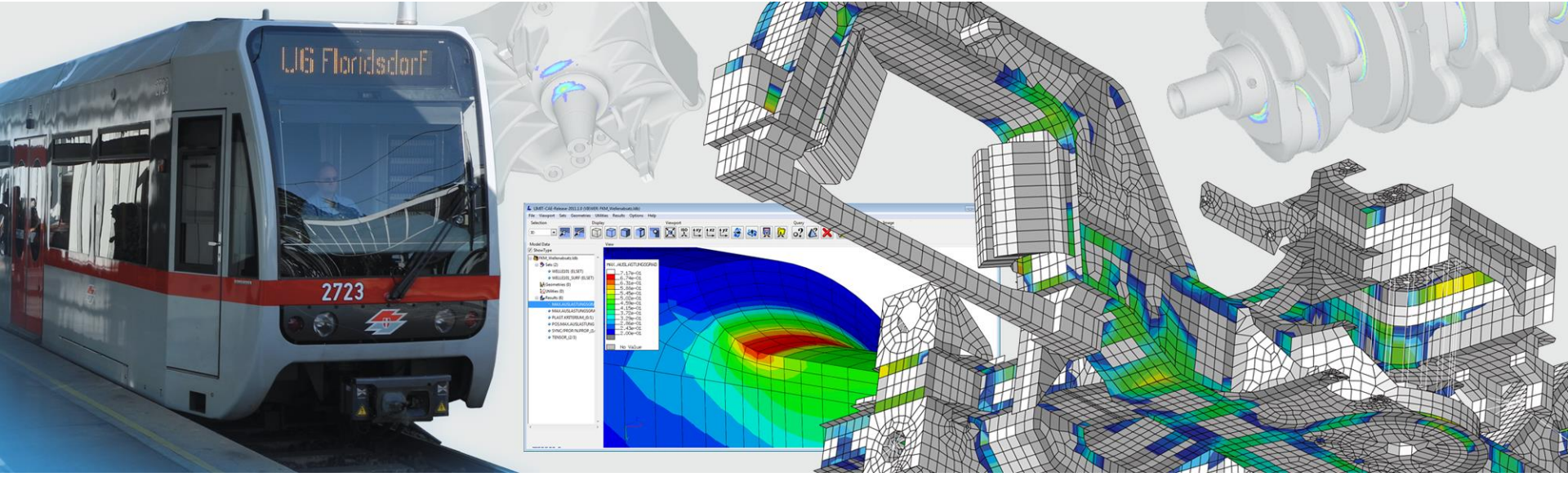
LIMIT
stress evaluation



LIMIT Release Notes

Version LIMIT2017

Introduction

This document describes substantial changes compared to the release LIMIT_2016. Further information can be found in the following documents:

- **[1] LIMIT-Efficient-Weld-Assessment-Loops-Including-Model-Changes.pdf**
  - New workflows for weld assessments using shell models
- **[2] LIMIT-Weld-Library-&-SurfaceMarker.pdf**
  - Using and customizing the Setup library
- **[3] LIMIT-Automated-Report-Generator.pdf**
  - significantly improved Report Generator and picture generation
- **[4] LIMIT-Ansys-Interface.pdf**
  - Elements for ANSYS Classic added

Novelties 2017

- **Interfaces**
  - ANSYS elements used in ANSYS Classic were added to interface (SOLID45, SOLID72, SOLID73, SOLID92, SOLID95), see [4]
  - Top/Bottom stress output correction possible for ANSYS shells
  - SWX interface was optimized for SWX2016 SP5 and newer
  - Abaqus: 2017 (Version 6171)
- **Weld Sets**
  - Generation of Part Sets from component sets in Nastran input decks, see [1]
  - Color coding according to Part Sets supported
  - Part sets can be used to generate Weld Sets, see [1]
  - Automatic checks of Setups when importing meshes with minor changes, see [1]
  - Regeneration of Weld Sets for strongly modified/remeshed models
    - based on property-IDs or
    - based on geometry, see [1]
  - Generation of weld sets from selected weld lines
- **Viewport options**
  - Select elements => to set or to part sets
  - Select one element => Hide by same property, part set, SW-set, weld set

Novelties 2017

- **Query**
  - Query window writes new information at the bottom of the page
- **Sensors**
  - Improved Sensor Generation algorithm
  - Improved deleting of Sensors
  - Hide by SW-sets included
  - Query options also for Sensors
- **Setups**
  - Split Setup command improved
  - Check of Setup status after importing new mesh in existing LDB
  - Setup status can be color coded
  - Results can be imported in Setup Manager and setups can be ordered according to results
  - Weld setup library and surface marker available for all codes, see [2]

Novelties 2017

- **Codes**
  - Temperature influence according to AD2000 added to FKM module
  - New FKM result variable MAX_FAT_STA_DoU = max. from static and fatigue
  - Damage calculation added to DVS1608
  - Automatic detection of true weld ends vs. internal ends due to splitting. End-notch case only used for true ends!
- **JobManager**
  - Filter for different Setup types was removed
  - At run time a reduced database (.sdef) with all setup data is stored as part of the job
- **Viewer**
  - Files needed to run new viewer
    - .geo … Results
    - .sens … if Sensors are used
    - .sdef … reduced database with setup information
  - Improved output for mixed codes in one run
  - Setup Manager was implemented into Viewer presenting Setup information
  - Results, weld symbols and model outline can be plotted in one picture
  - Query options available for Sensors
  - User defined load names are used in output, rather then internal numbers

Novelties 2017

- **Report Generator / Report**
  - Improved and intuitive usage of Report Generator, see [3]
  - A list of all Setups sorted in descending order by their respective degrees of utilization is now available in the LIMIT Report.
  - The Group Parameters of Weld Setups printed in one table.
  - Positions, notch cases and degree of utilization results are now presented in combined tables for static and fatigue strength in the LIMIT Report
  - Links in the HTML page Created by the LIMIT Report Generator now work after importing the HTML page in Microsoft Word. New functions and easier to use
  - Better visualization of results

Last slide