IMA DRESDEN

ANALYTICAL STRENGTH ASSESSMENT

WIAM® fatigue RIFEST – THEORY AND PRACTICE WITH THE FKM GUIDELINE

We are the partner you can contact when it comes to strength assessment. Determine this by calculation with the WIAM® fatigue RIFEST Software according to the FKM guideline.

DAkkS
Deutsche Akkreditierungsstelle
D-PL-13119-01-00

SOFTWARE WIAM® fatigue RIFEST

Our software is the solution for the construction process and component stress analysis.
The software shows the guideline true strength assessment in accordance with FKM-Guideline issue 2012. WIAM® fatigue RIFEST currently uses the 6th edition of the FKM-Guideline of 2012

Engineers and constructors in several areas benefit of the theoretical knowledge and practical know-how of the methods and calculation algorithms:

- Strength assessment for selective present stresses basing on FEM calculations or strain gauge measurements

PROGRAMME CONTENTS

BASIC EDITION

- Fatigue strength assessment as assessment of the fatigue limit assessment or variable amplitudes fatigue strength assessment including required static strength assessment
- Strength assessment for several verification points on the basis of existing local elastic stresses (e.g. of FEM-calculation or strain gauges measurements)
- For volumetric non-welded components (base material)
- Comprehensive database for non-welded machine components: rolled steel, iron casting materials, aluminium materials (incl. material characteristics)
- Normal and increased temperature
- Updates, support and maintenance
- German or English version

PREMIUM EDITION

The package Premium offers in addition:

- Shell-shaped welded components
- Comprehensive database for welded machine components
- Comprehensive presentation of the results in report form
- Two languages: German and English versions

SERVER LICENSE VERSION

External on-demand server

- site-independent and worldwide use through an Internet access
- more flexibility during usage
- low IT effort
- automatic software maintenance
- constant availability
- shorter, more flexible terms
- cushioning of high loads

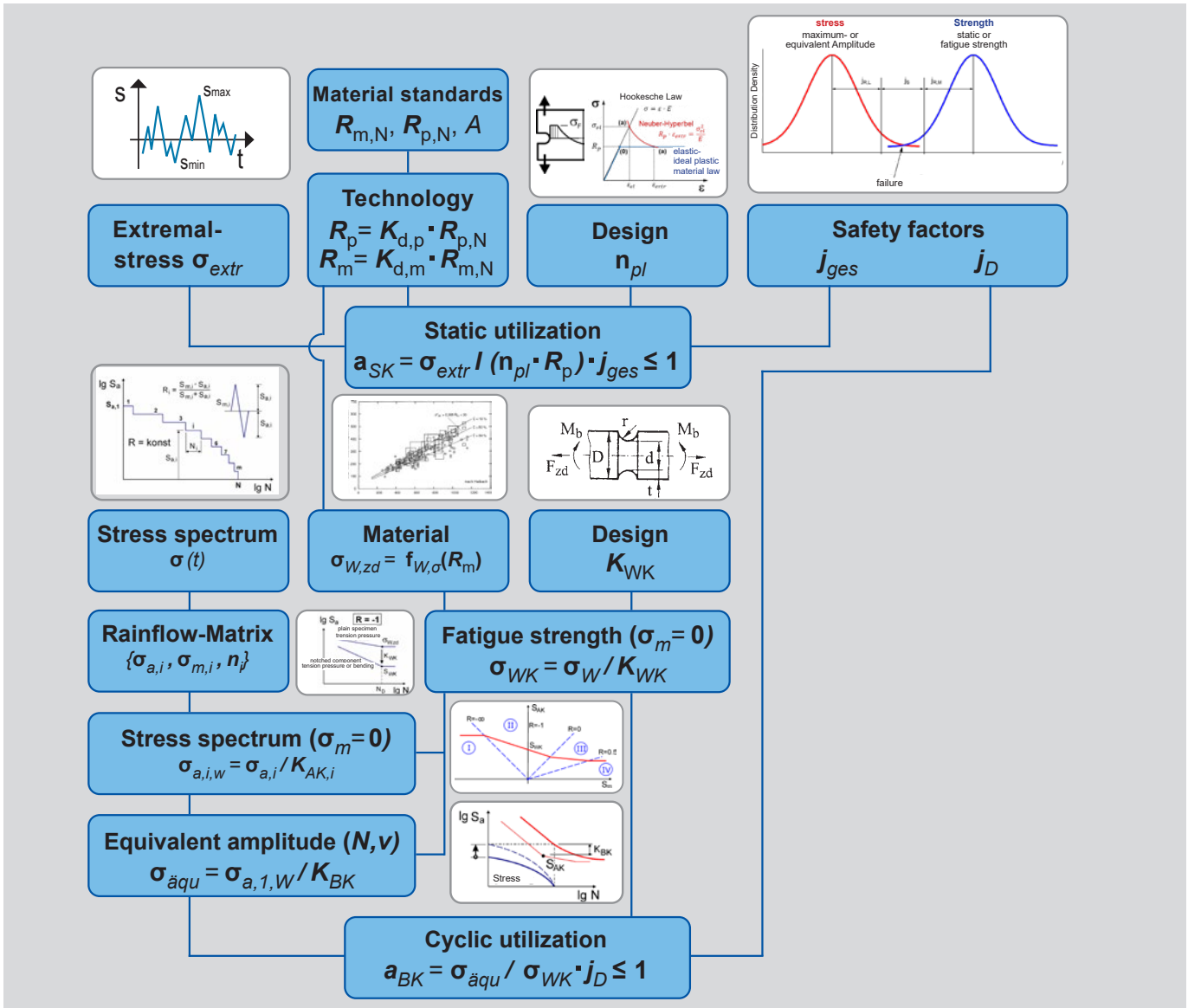
BOOKABLE OPTIONS

- Server version
- Site License Model
- Group licence model
- Floating license
- Updates, support and maintenance after the first year
- Competent IMA consulting for FKM guide line
- Buying or rental license

ANALYTICAL STRENGTH ASSESSMENT WITH FKM-GUIDELINE

The FKM-Guideline "Analytical strength assessment for components" has been published by the Forschungskuratorium Maschinenbau e.V. (FKM). The first issue of FKM-Guideline was published in 1994. IMA Materialforschung und Anwendungstechnik GmbH is significantly involved in the development of the guideline.
The new version will be published by the 7th edition in November 2020.

The FKM-Guideline contains a calculation algorithm with a consistent structure for all cases of application. The algorithm consists of procedures, equations, tables and graphs.



TRAINING FKM-GUIDELINE

TRAINING CONTENTS

1. Introduction to FKM-Guideline
2. Non-welded components
3. Welded components
4. Acquisition of input values for strength assessment
5. Individual points of interest

We train you to the FKM-Guideline on site or in our house. The training shall explain the methods and background information of the analytical strength assessment according to FKM-Guideline.

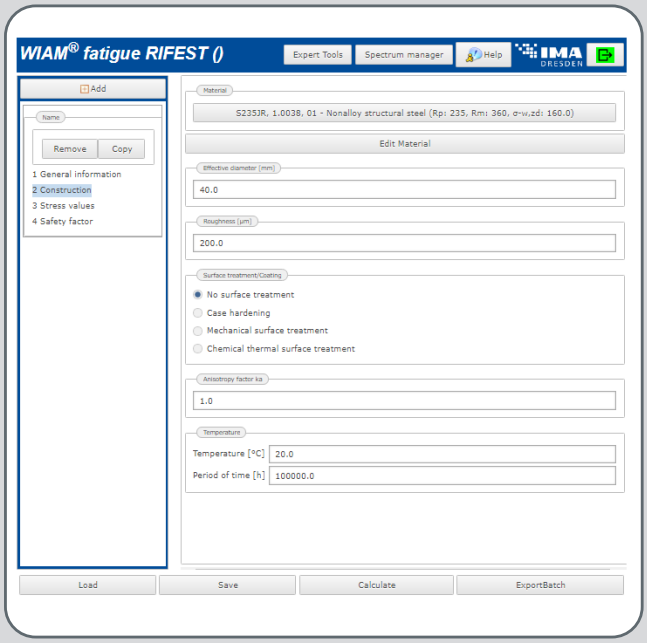
TRAINING WIAM® fatigue RIFEST

We provide trainings about the calculation programme and the FKM guide line.
Please contact us and arange a meeting – either at our facilities or directly at your site.

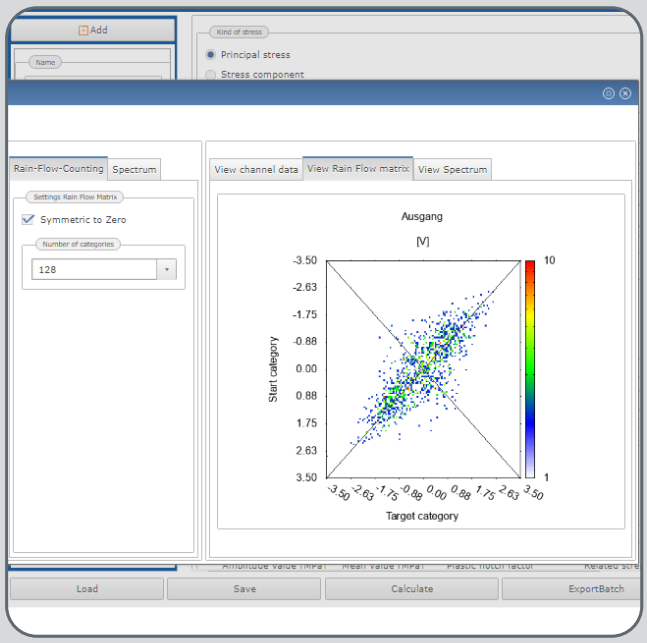
Visit for more information:
ima-dresden.de/Training

TESTVERSION

You can test WIAM® fatigue RIFEST with the demo download:
http://www.wiamnetwork.com/fatigue RIFEST/demo/de/wiamrifest



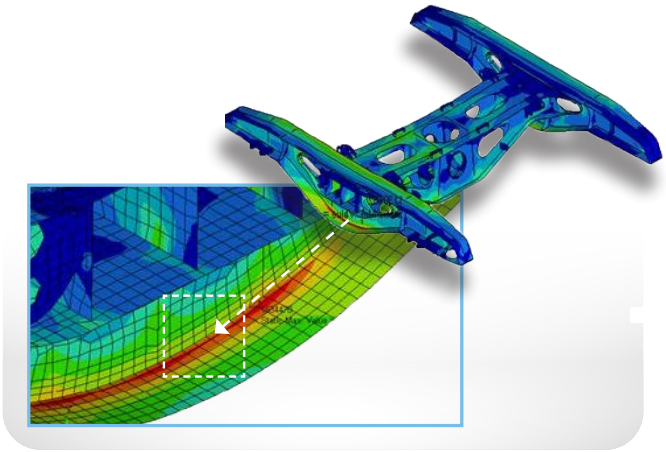
View of the user interface



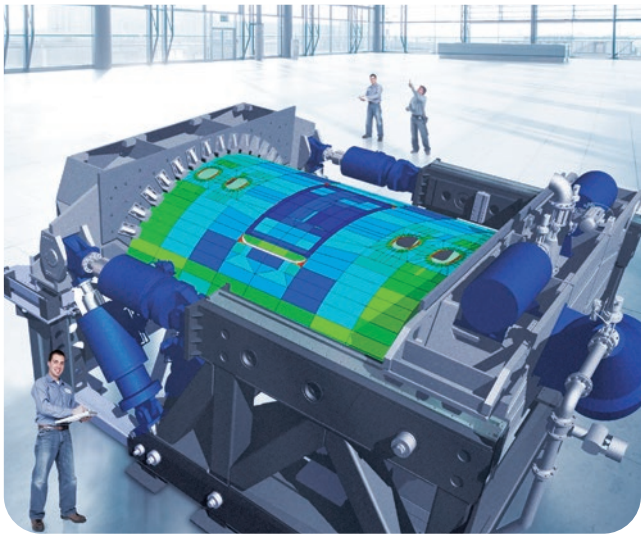
Output using Rain Flow Matrix as an example

SIMULATION AND COMPUTATION

- Development and elaboration of concepts for the analytical strength assessment for practical applications under consideration of our knowledge from several fields of ndustrial application
- Solution of urgent problems with component strength by methodical support, engineering services and constructive consultancy
- Analytical strength assessments on base of measured stresses, also in extraordinary problems



- Development and implementation of customer-specified software for analytical strength assessment and measurement data analysis
- Work on research and development projects to analytical and experimental strength assessments



FIND INFORMATION, MANAGE DATA, NETWORKING KNOWLEDGE: WIAM® ICE

The structuring, processing and management of information helps to ensure expert technological know-how in the long term, streamline processes and thus increase quality and efficiency. The standard WIAM® ICE product promotes the flow of knowledge, simplifies areas of complexity and ensures added value and innovative strength. Having originated in the field of Material Sciences, the generic WIAM data model can now manage all kinds of knowledge and information. With WIAM® ICE, you can record, research, link, visualise, compare and evaluate diverse data easily and clearly

PUTTING THE WORLD TO THE TEST

IMA Materialforschung und Anwendungstechnik GmbH (IMA Dresden) is an internationally operating company for engineering services and scientific-technical consulting around qualification, validation and monitoring of materials, components and products. Located between research and industry, we will accompany you, if desired, along the entire development of a product with comprehensive engineering competence. As we work in many sectors involving traffic engineering, plastics and metal industry and others, we can offer you a head-start with our comprehensive know-how.

We work according to German, international standards and we are certified according to DIN EN 9100 and ISO 14001. Nearly all relevant test laboratories are accredited according to DIN EN ISO/IEC 17025. The test labs have most modern test-, measure- and control technology over an area of more than 10,000 m² test field.

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BENEFIT FROM THE COMPETENCE OF IMA DRESDEN

As an independent test provider we guarantee reliable results and strict confidentiality. Our credo of thinking and acting like our customers was not carelessly formulated. It contains an earnest pursuit of engineering perfection, which merges intelligent solutions with sustainable usable result at fair prices. This, of course, also includes the flexibility to respond to all kinds of request and, in doing so, to provide peak performances which are not possible elsewhere. Each of our employees bears a portion of this responsibility.

Please do not hesitate to contact us for any questions or inquiries at ima@ima-dresden.de

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