LAUTERBACH
VERFAHRENSTECHNIK GmbH

Engineering & Software

Lauterbach Verfahrenstechnik GmbH

Background

The company was founded in 1978 by Dipl.-Ing. Dietrich Lauterbach as an engineering office for process engineering.

At the beginning, the activity was mainly for refineries such as MOBIL / ESSO EXXON and OMW in basic and detailed engineering.

Lauterbach chemical engineering's many years of experience in this field are still in great demand today.

Lauterbach Verfahrenstechnik GmbH

LV Basic Engineering

Over 350 refinery projects have already been planned. The projects cover the entire plant spectrum from improvement measures to the planning of complete plants.

Starting with a project to recover of flare gas at ESSO refinery Karlsruhe and continue till actual finished projects at district heating of the town Karlsruhe.

Lauterbach Verfahrenstechnik GmbH

The Team

The LV team has grown increasingly in recent years and consists of engineers with many years of experience in the fields of process engineering, mechanical engineering and information technology.

It is supported by partner companies if required, so that we can react quickly to customer requests.

LAUTERBACH
VERFAHRENSTECHNIK GmbH

Engineering & Software

Lauterbach Verfahrenstechnik GmbH

Research projects in cooperation with partners and universities

- Development of novel medicinal tablets.
  - FEA Simulations / Software development
- AI based welding process.
  - Software application
- Design and optimization of a fermentation process.
  - Process engineering

Lauterbach Verfahrenstechnik GmbH

Software

- VDI Heat Atlas
- Heat Exchangers
- Strength calculations
  - AD 2000 – EN 13445 - EN 13480 – ASME – FEM

Services

- Calculation
- Simulation
- Training
- Expertise

Since 1978

Certificate

Standard: ISO 9001:2015

Certificate Registr. No.: 01 100 044763

Certificate Holder:

LAUTERBACH VERFAHRENSTECHNIK GmbH

Lauterbach Verfahrenstechnik GmbH
Eugen-Langen-Str. 2
76227 Karlsruhe
Germany

Scope: Development of modular software for pressure vessel design and chemical engineering.

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2020-07-01 until 2023-06-30.
First certification 1999

2020-05-28

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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IAF

DAkkS Deutsche Akkreditierungsstelle D-ZM-16031-01-00

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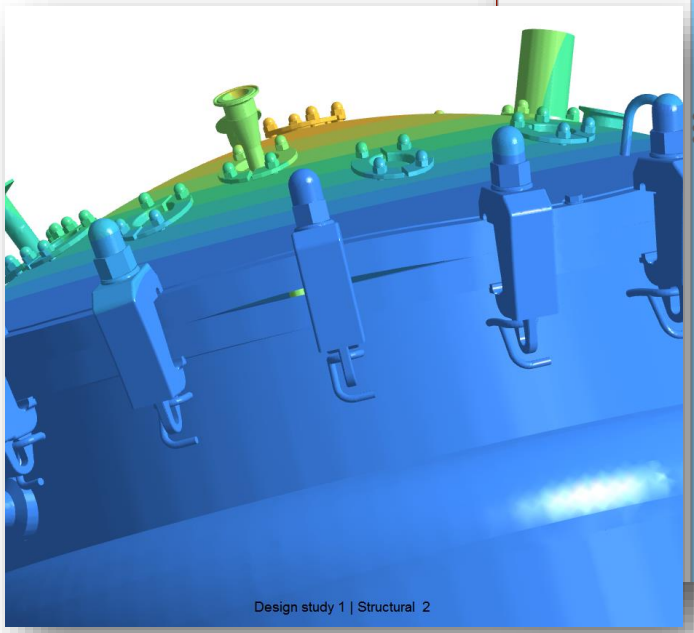
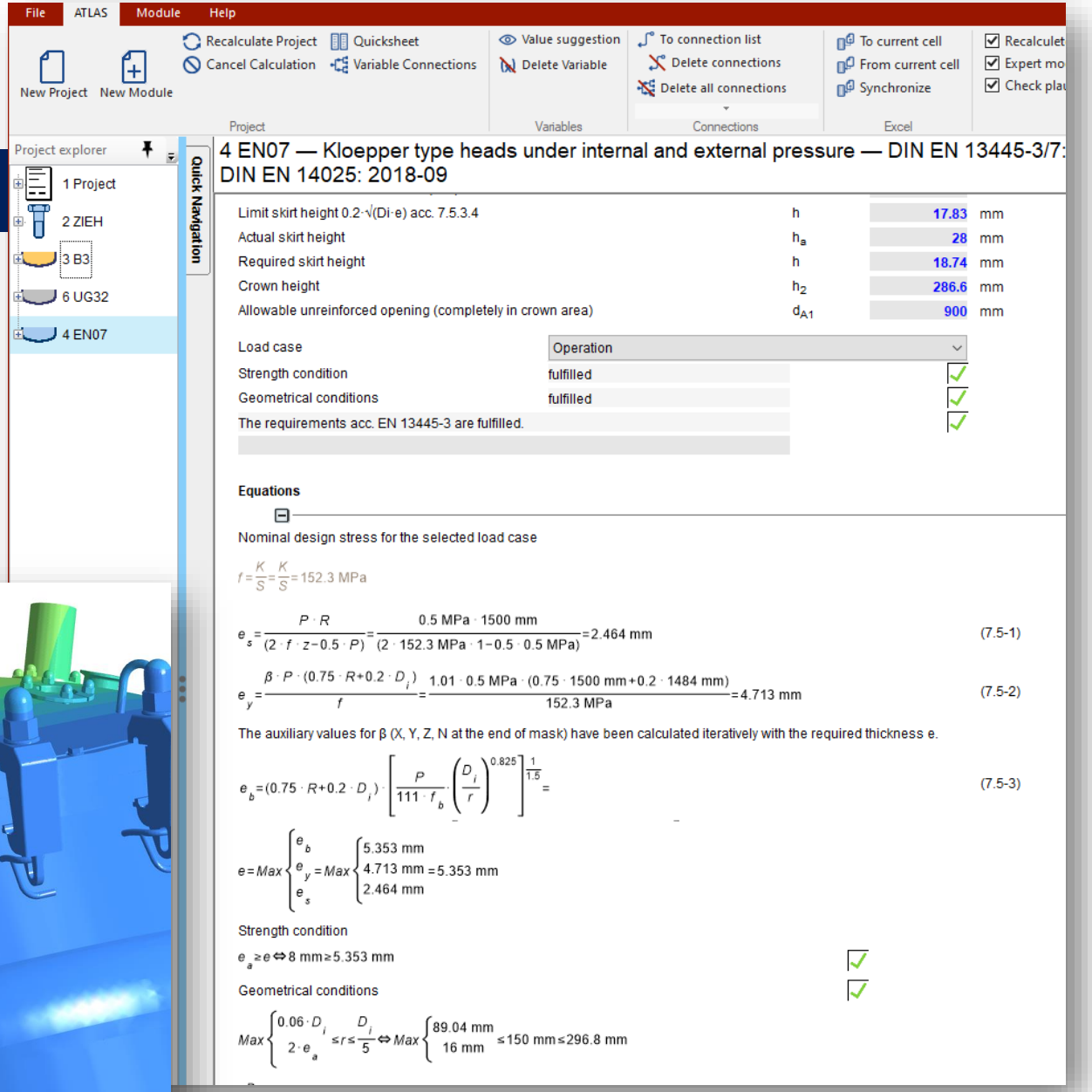
PROJECTS

Pressure Vessel Design

Software and Engineering by Lauterbach

- EN 13445-3
- EN 13480
- AD 2000
- ASME VIII Div. 1 / 2
- FEM
- etc.





PROJECTS

Heat Exchanger Design

Software and Engineering by Lauterbach

- Aircoolers
- Shell and Tube
- Coil-Type
- Fired
- Electrically-heated
- Double-Pipe
- Plate
- Flue gas, etc.

Courtesy of Alfa Laval Aalborg A/S, Marine Division

PROJECTS

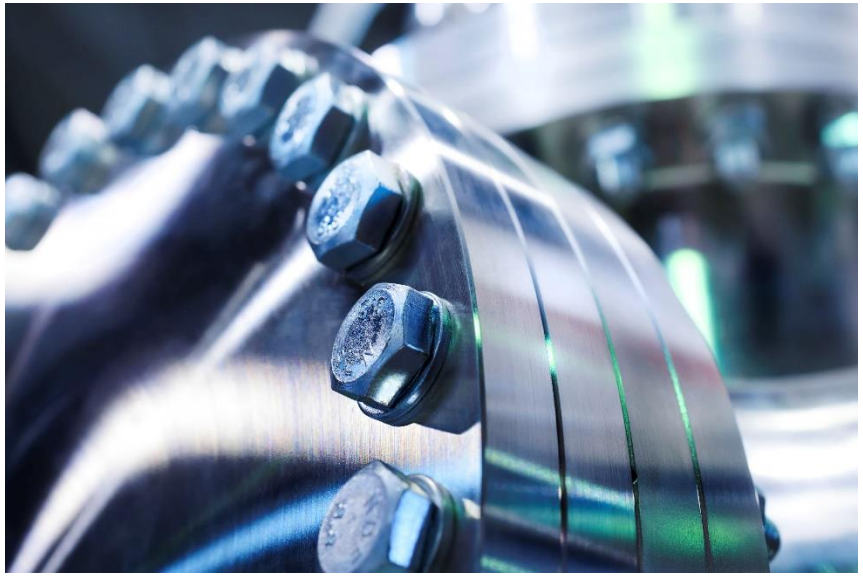
Stability against collapse

- Static calculations of columns
- Challenge: Eartquake loads and Wind loads (Hurricane area)
- 350 ft (104 m) high

PROJECTS

Leakage proof of flange connection

- Leakage Proof of deep sea piping flanges
- Critical load case: Installation process: S-Lay
- Calculation performed by analytic and FE simulation



PROJECTS

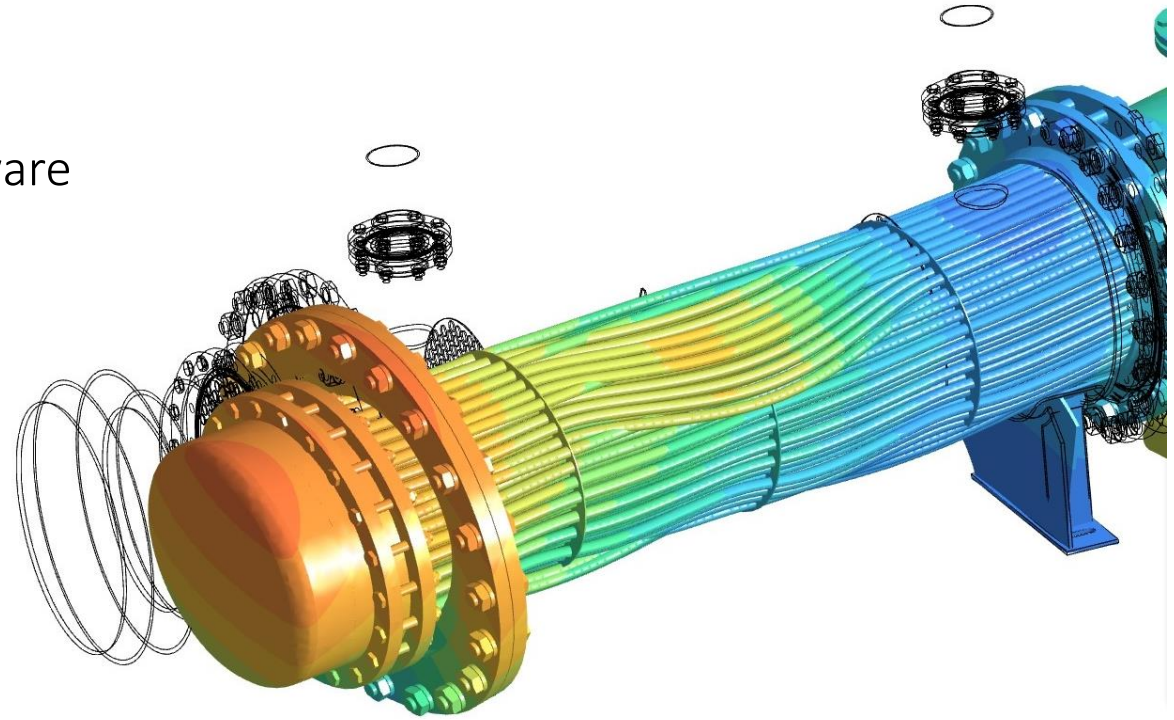
Expertise

Case: Damage of heat exchanger

- Evaluation of Damage:
  - Vabriation Analysis by Lauterbach Software

- Optimization of design

  to prevent damage in future



VDI Heat Atlas Software

Heat Transfer

- Flow through pipes and ducts
- Flow around bodies
- Free Convection
- Condensation and Evaporation

Pressure Loss / Hydrodynamics

- Pipes and fittings
- Fillings
- Multi-phase flows

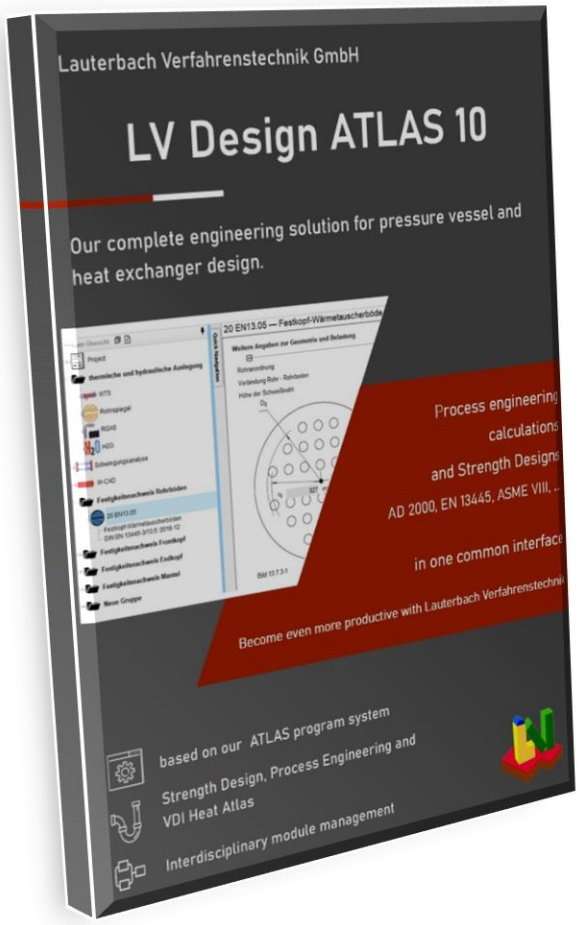
Physical Properties

VDI-Wärmeatlas @Springer-Verlag

- Lauterbach Verfahrenstechnik is unique Software Provider of the VDI HEAT Atlas

- Since 1956 the standard work for thermal Process Engineering

New: LV Design ATLAS 10 and LV FEM Toolbox



- Our complete engineering solution for pressure vessel and heat exchanger design
- Process engineering calculations and strength designs according to AD 2000, EN 13445, EN 1591, ASME VIII, Eurocode and much more in one common interface
- Design Atlas 10 includes fully integrated FEM module with Comsol Solver

References

ABB Automation Groducts GmbH

APL Apparatebau GmbH

Aquafil Engineering GmbH

Bayer Antwerpen

Bilfinger E.M.S GmbH
Bilfinger VAM Anlagentechnik GmbH

Bosch Industriekessel GmbH

BWT AQUA AG

Heat gas
technologies GmbH

Ernst Möschle
Behälterbau GmbH

Kelvion Germany GmbH

MAN Diesel & Turbo SE

Swiss Safety Cetner AG

Siemens VAI metals
Technologies GmbH

Uraca GmbH & Co. KG

Wecubex Rohrtechnik GmbH

Contact

Lauterbach Verfahrenstechnik GmbH

Eugen-Langen-Str. 2

76227 Karlsruhe

Germany

Email: info@LV-soft.de

WWW: www.LV-soft.net

www.solvematics.com