

LIFTING EQUIPMENT AND PRODUCTION EQUIPMENT TO CUSTOMER REQUIREMENTS

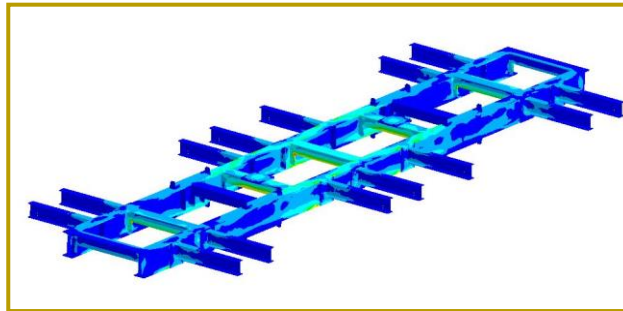


LOAD CAPACITIES FROM 150 KG TO MORE THAN 1,000 t

1. COMPANY
2. DESIGN AND ENGINEERING
3. REFERENCE COMPONENTS
 - LIFTING EQUIPMENT
 - PRODUCTION EQUIPMENT DESIGN



Design



Engineering

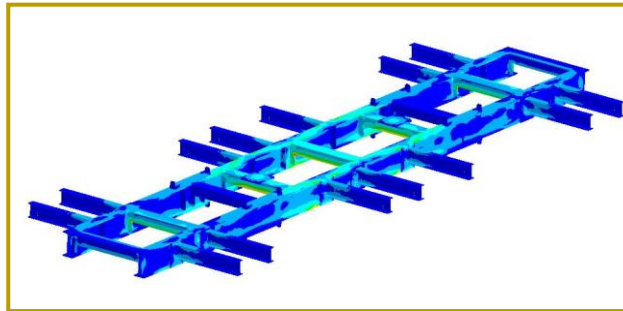


Manufacturing

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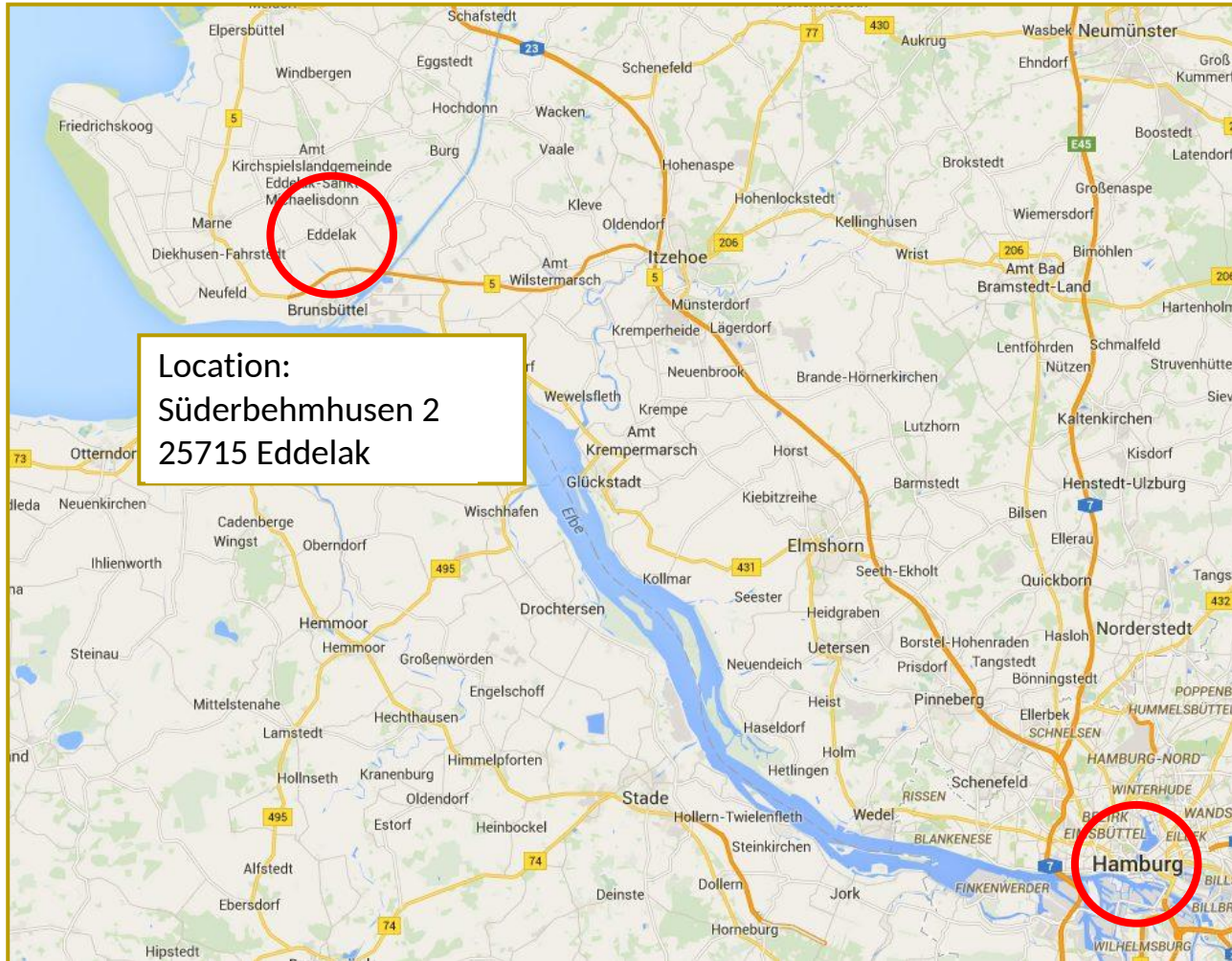
Design

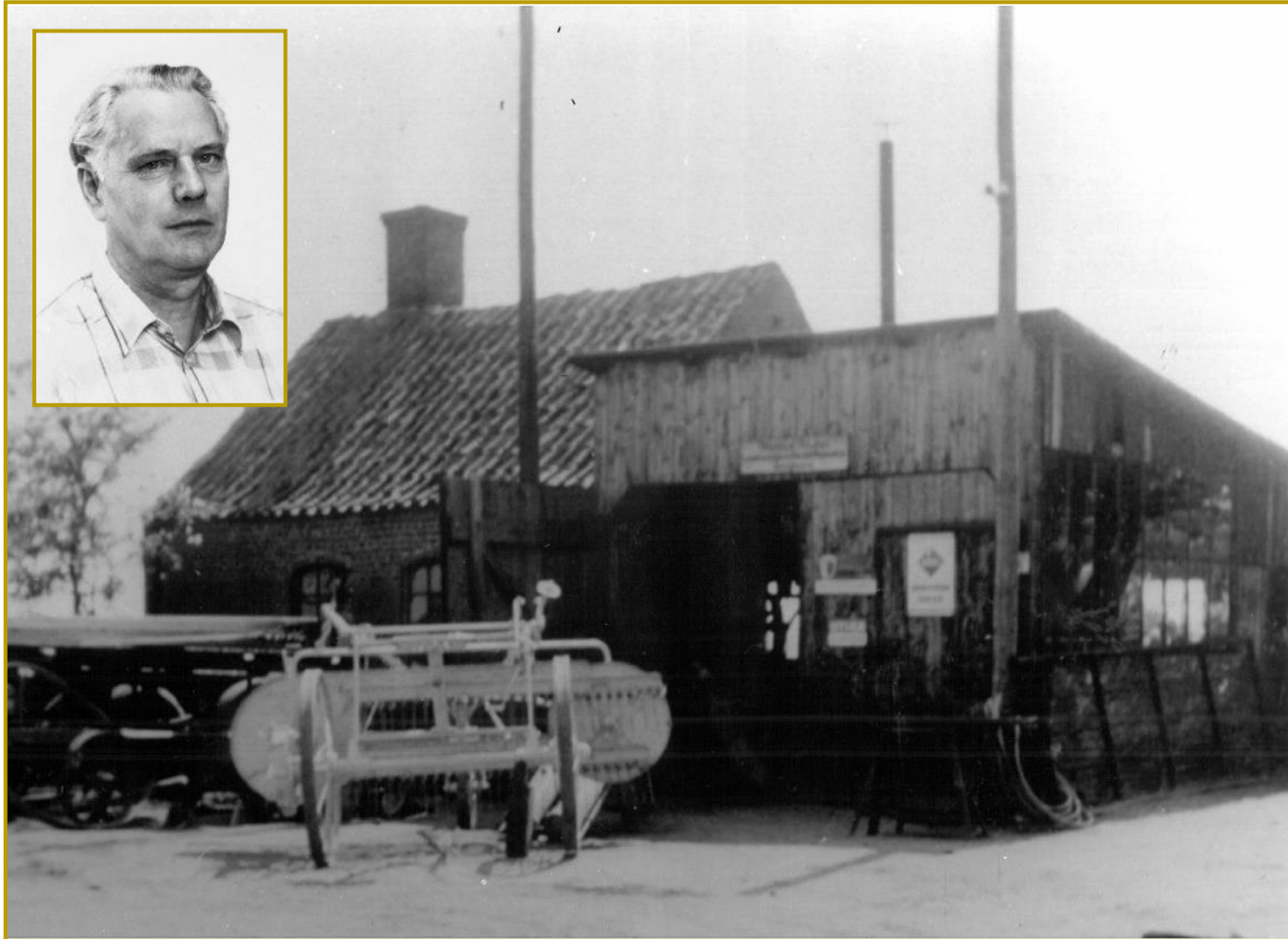


Engineering



Manufacturing





Company founder Karl Wrede and the first company building



> 4,000 m² production area

85 x 15 m - crane coverage: 4 x 5 t, 2 x 2.5 t

70 x 30 m - crane coverage: 2 x 12.5 t, 2 x 5 t

Components weighing up to 25 t can be handled by crane

Family-owned company, second generation

Founded: 1960

Employees: approx. 45

Revenue: EUR 6 million (2025)

Revenue split: 45% / 45% / 10%: Industry / wind energy / other

Legal form: GmbH

Managing Director: Arne Jürgens

Shareholder: Dipl.-Ing. (SFI) Jan Wrede

Balance sheet total: EUR 4.9 million (31 Dec 2025)

Equity ratio: 77% (100% self-financed / independent of banks)

- | | |
|--|---|
| - DIN EN ISO 9001 | Quality management system (QMS) |
| - DIN EN 1090-2 EXC 3 | Execution of steel structures |
| - DIN EN 1090-3 EXC 3 | Execution of aluminium structures |
| - DIN EN ISO 3834-2 | Comprehensive quality requirements for fusion welding |
| - AD 2000 Code HP0 | Manufacture of pressure vessels |
| - DIN 2303 Q2 / BK1 - BK4 | Welding of defence products |
| - Certified specialist company under the Federal Water Act (WHG) | |
| - DNV WELDING WORKSHOP APPROVAL CERTIFICATE (WWA) | |
| - In-house NDT personnel | DIN EN 473 VT, PT, MT (Level 2) |
| - Certified welders | DIN EN ISO 9606 (MAG, MIG, TIG, MMA) |
| - Material re-stamping agreement | TÜV NORD Systems GmbH |
| - DIN EN ISO 45001 | Occupational health and safety management system |
| - ILO OSH 2001 | Occupational safety and health management system |
| - "Systematic Safety" (SMS) | German Social Accident Insurance quality seal |

1. COMPANY

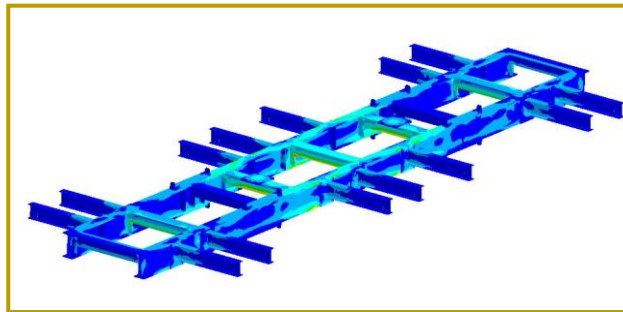
2. DESIGN AND ENGINEERING

3. REFERENCE COMPONENTS

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Design



Engineering



Manufacturing

3D design (Autodesk INVENTOR)

Mobile coordinate measurement and 3D scanning

Structural frame calculations (RSTAB)

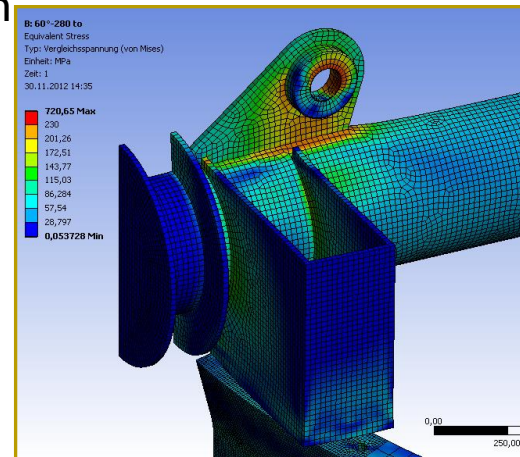
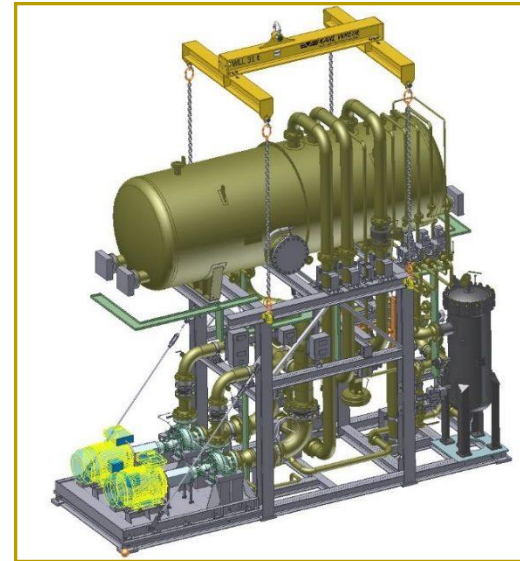
FE analyses (ANSYS Pro NLS)

Calculation reports suitable for independent verification

Operating manuals

Risk assessments

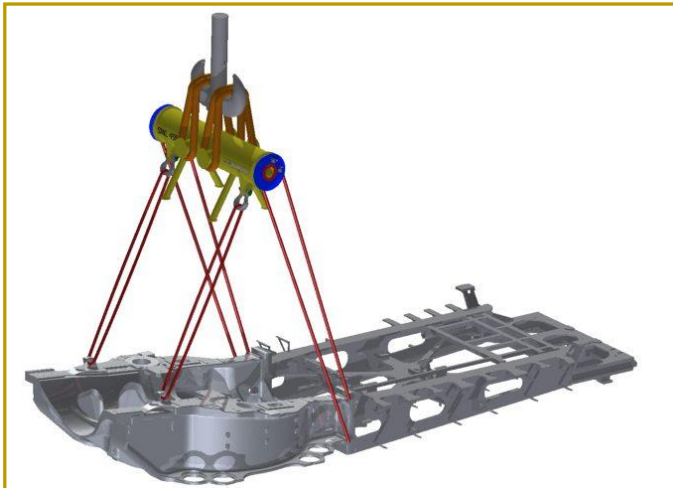
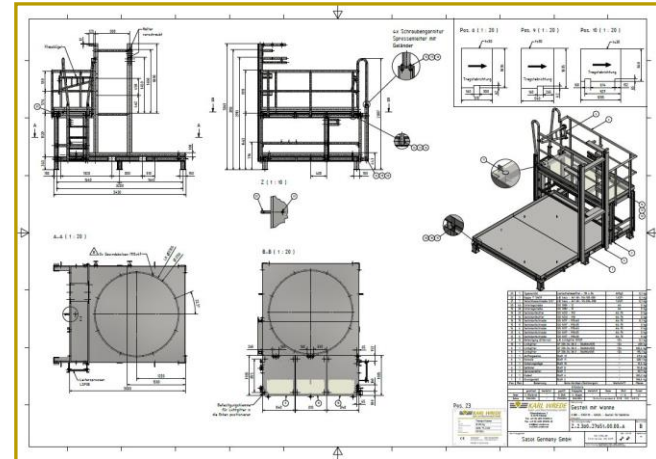
Support with component certifications



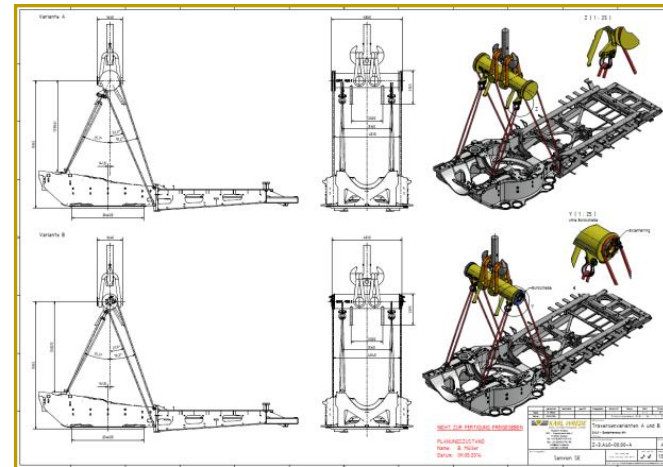
- **Design, engineering and manufacturing in accordance with customer requirements / specifications**
- **Design basis, including:**
 - Machinery Directive 2006/42/EC
 - DIN EN 13155 - Cranes - Safety - Non-fixed load lifting attachments
 - DIN EN ISO 12100 - Safety of machinery
 - DIN 15003 - Lifting appliances - Load suspension devices, loads (...)
 - DGUV Rule 100-500 - Operation of load suspension devices (...)
 - DNV-ST-001 - Marine operations and marine warranty
- **Manufacturing following customer approval of the drawings**
- **Documentation in accordance with the Machinery Directive**
 - Operating instructions, risk assessment, declaration of conformity
 - Inspection logbook
 - CE marking

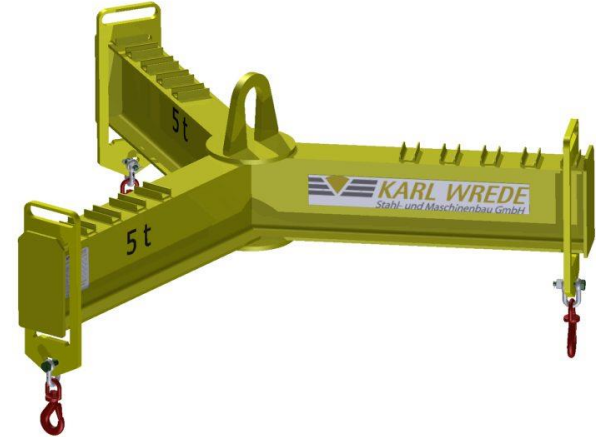


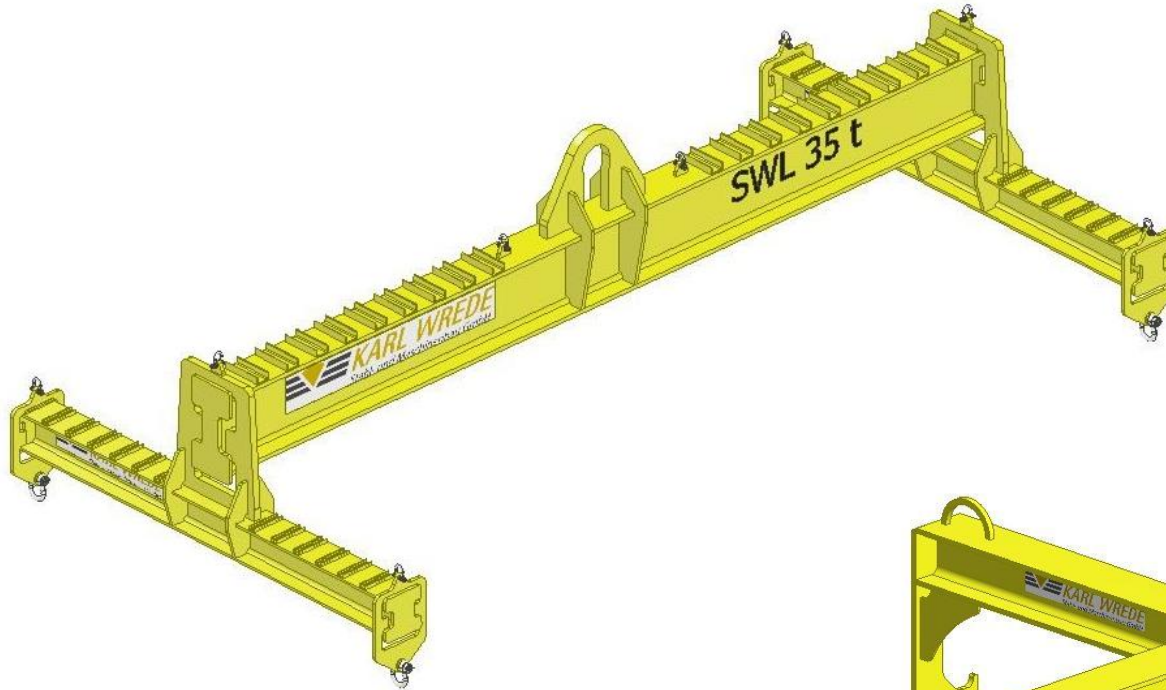
Custom support frame for vessel



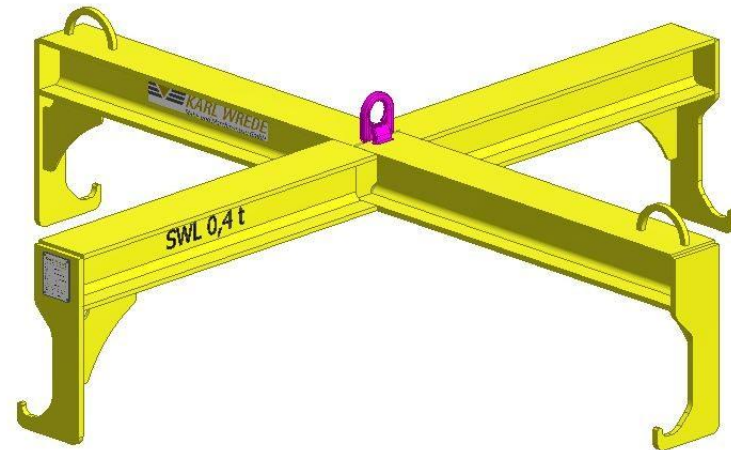
Nacelle lifting beam - SWL 480 t



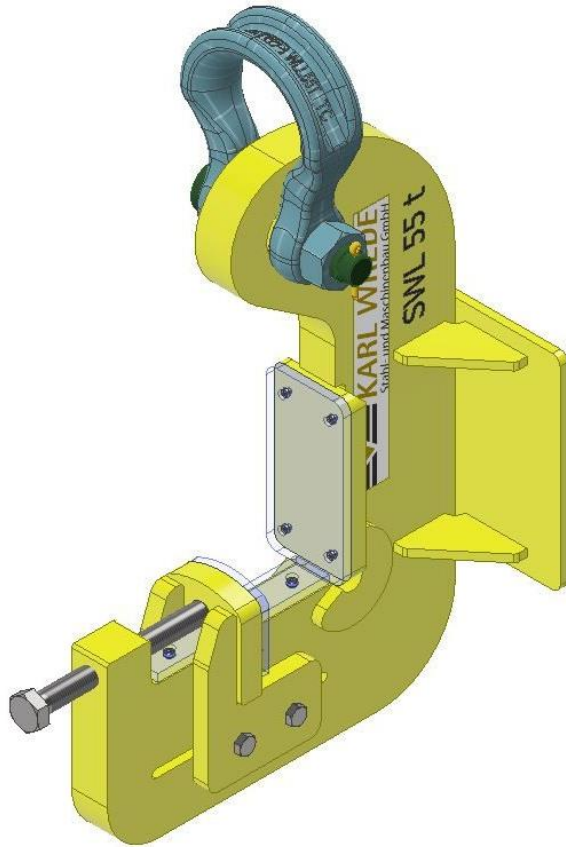




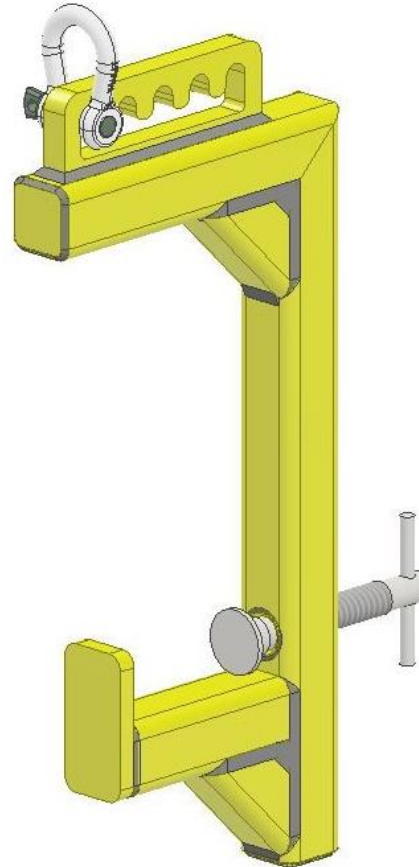
Variable H-beam



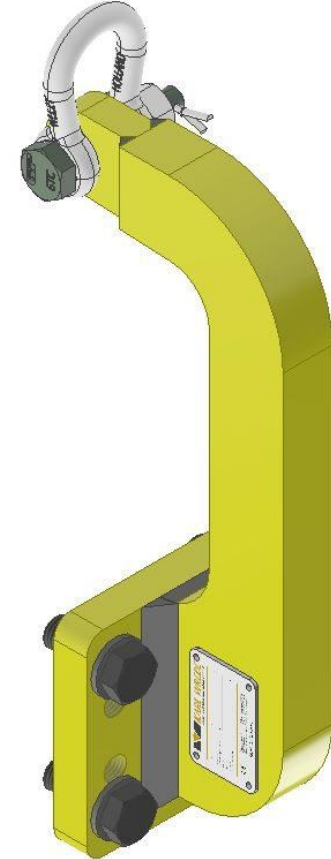
Cruciform lifting beam



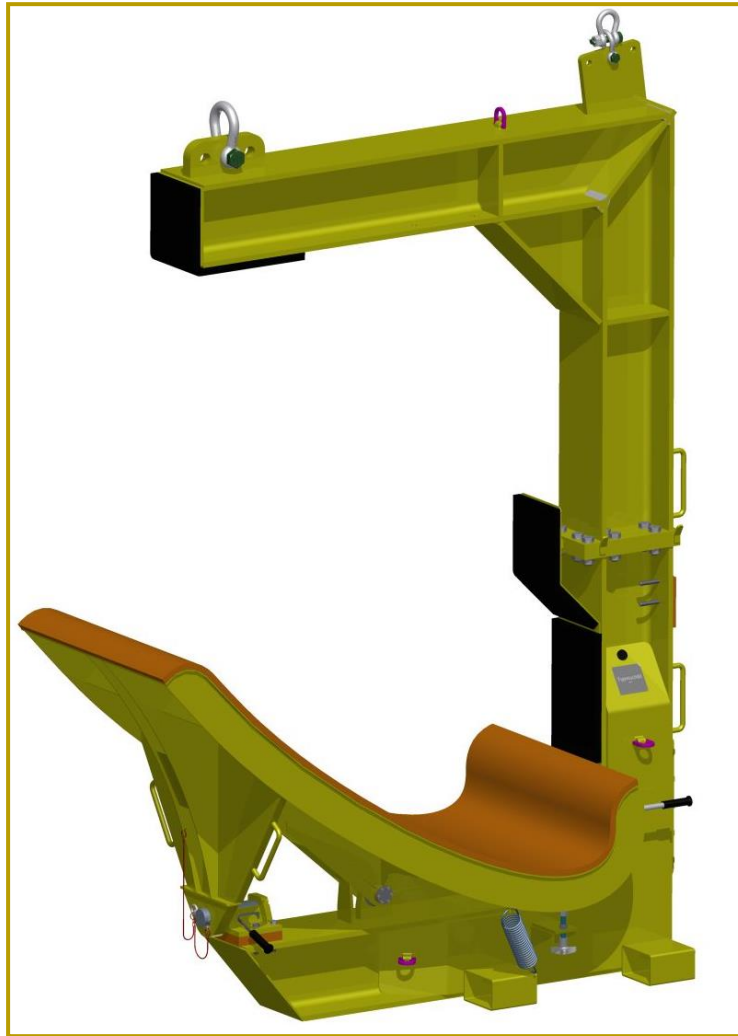
J-hook
Tower segment



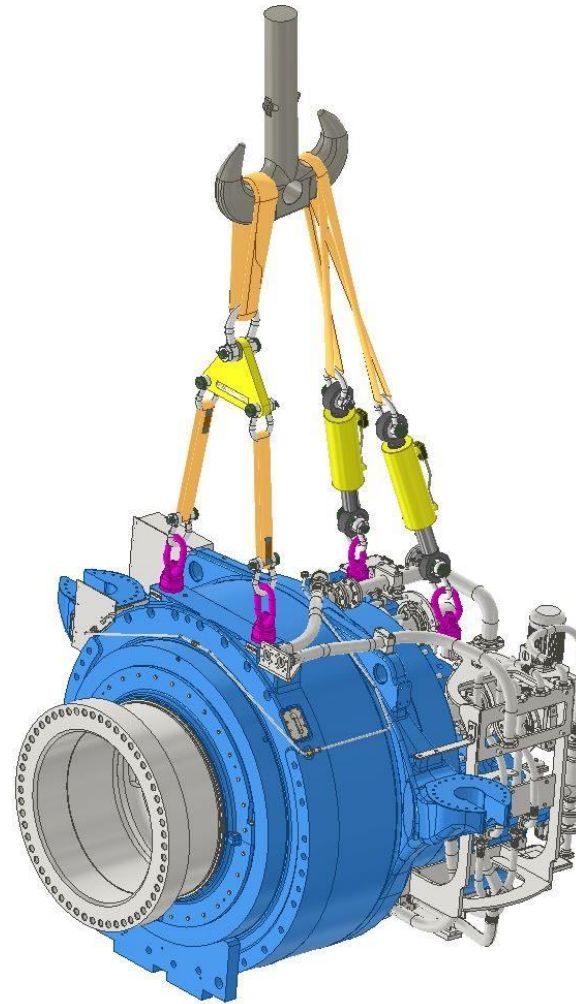
C-hook
Bearing support



C-hook
Manhole cover



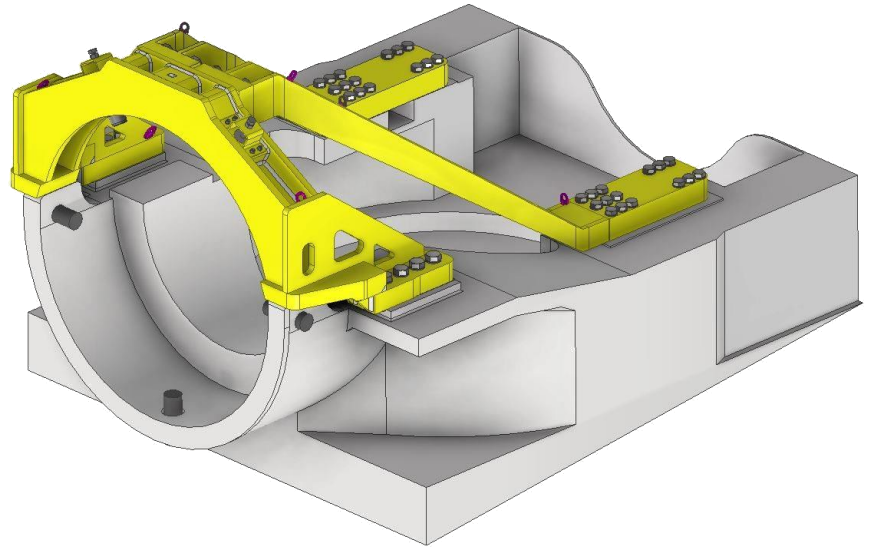
C-hook - rotor blade



Gearbox lifting attachment - incl. hydraulic tilt adjustment



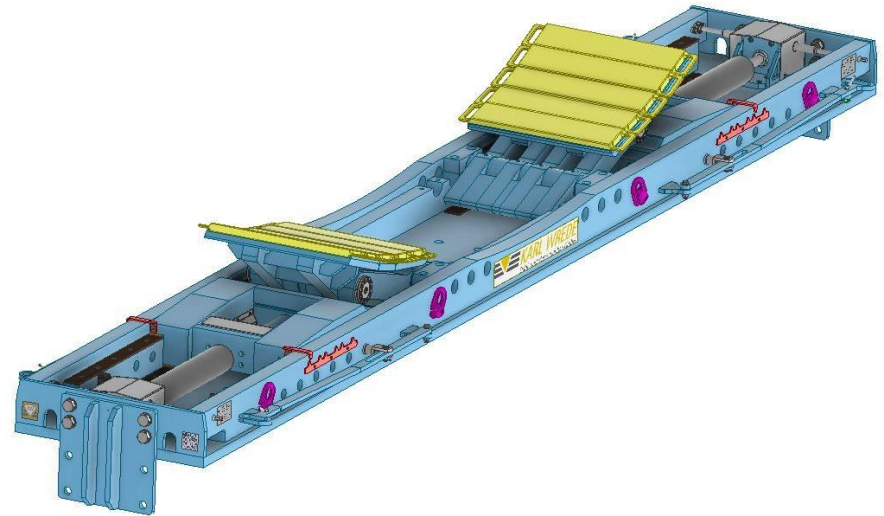
**Storage frame
Nacelle**



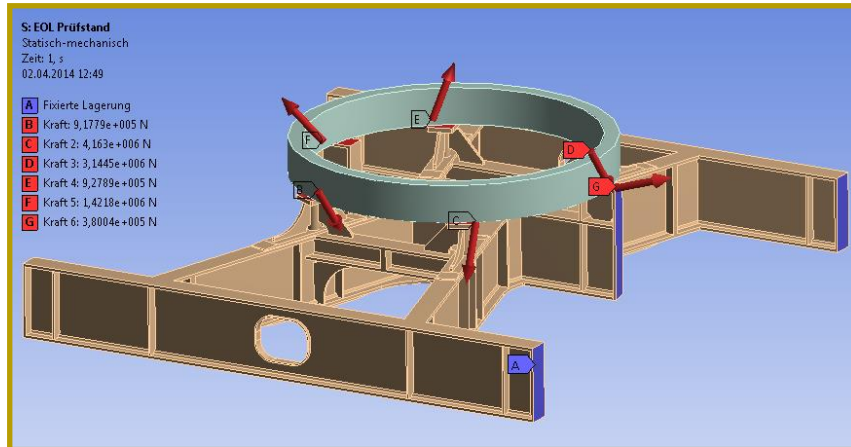
**Rotor Parking
Tool (RPT)**



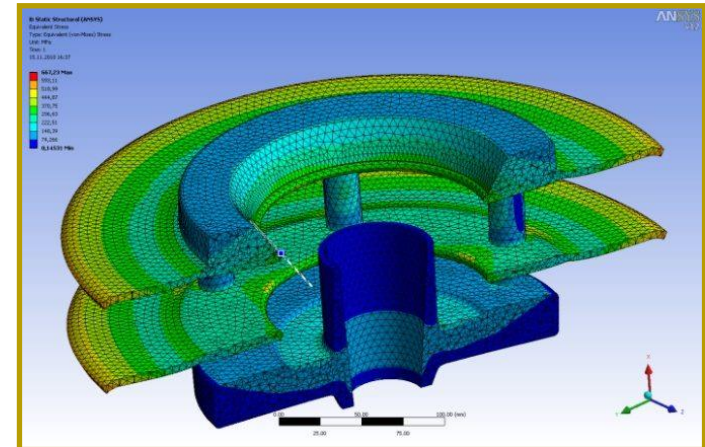
Transport frame
Drive train



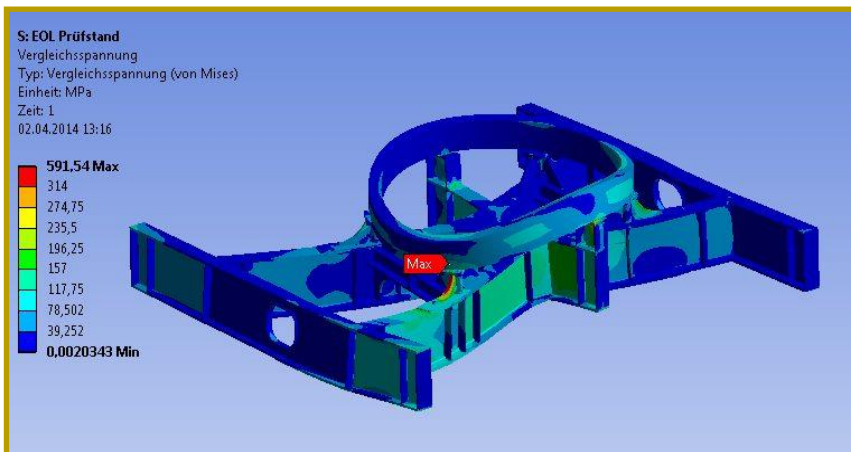
Roll-off restraint



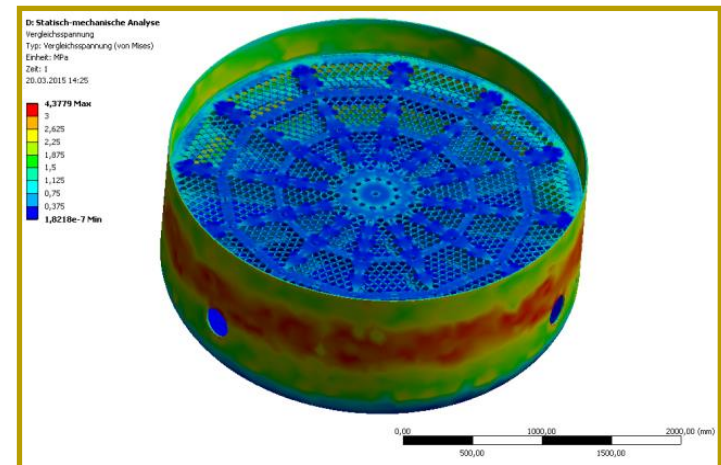
Wind turbine transport frame



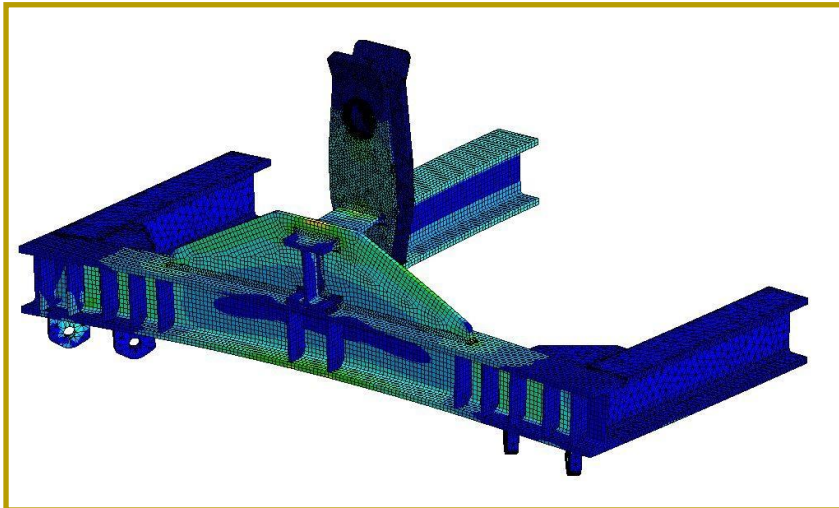
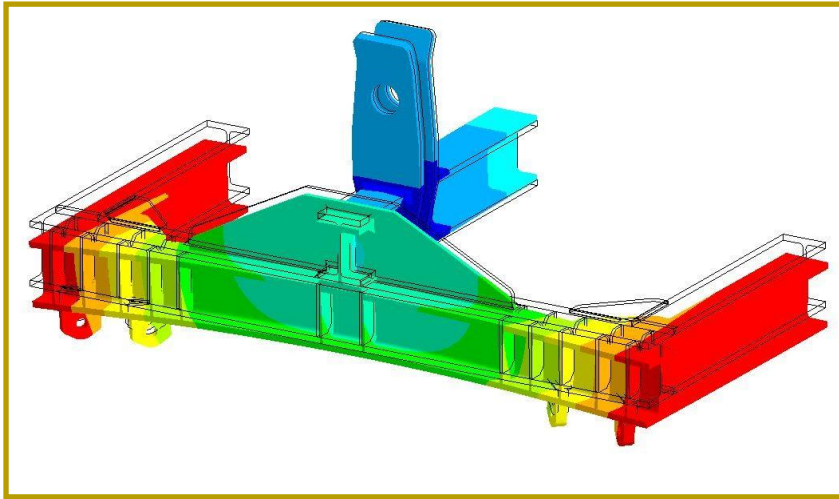
Disc stack, spray dryer



Wind turbine transport frame



Reactor base

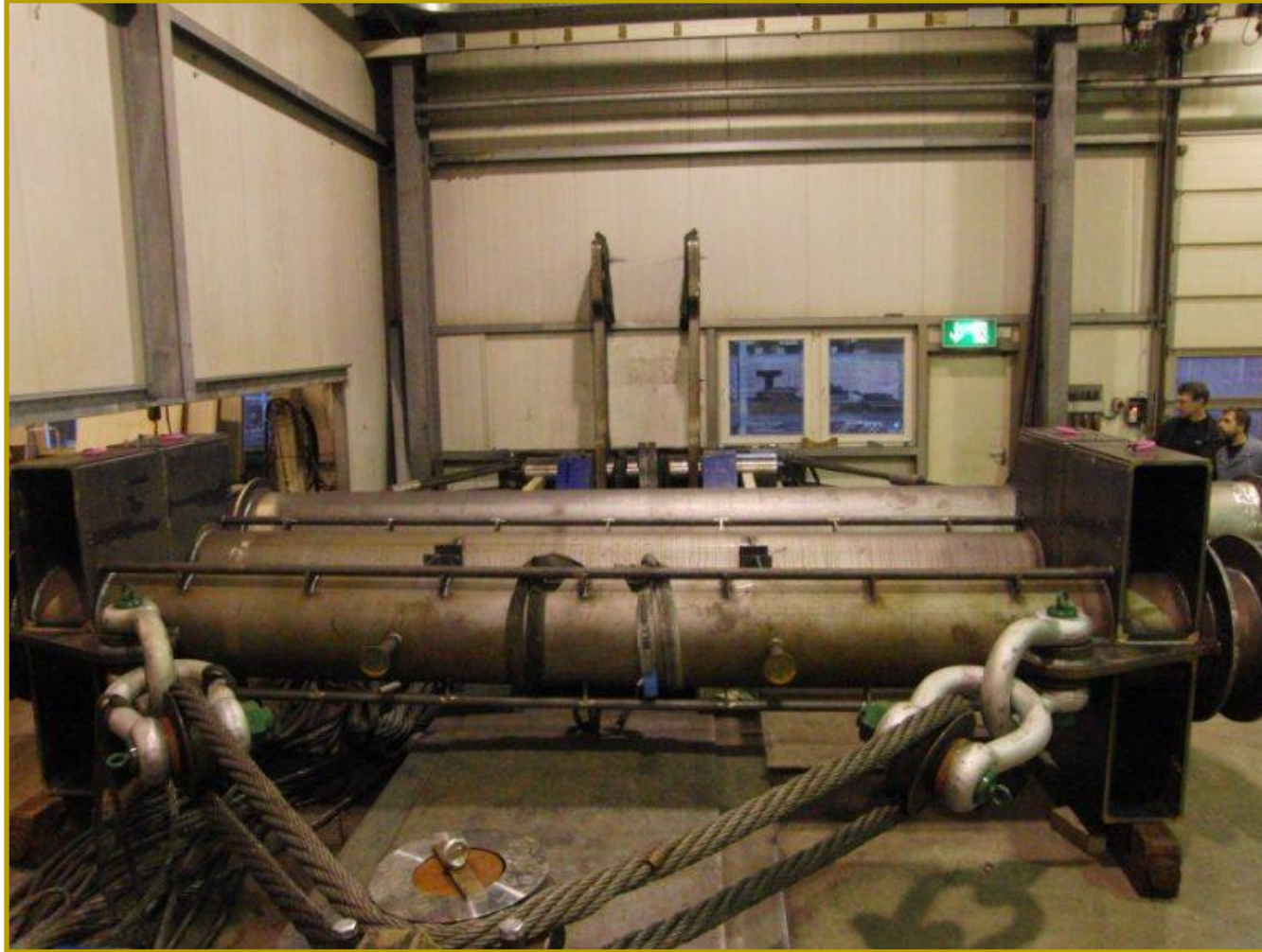


110 t frame lifting beam





Pile lifting tool - SWL 270 t - l = 25 m



Upper tower lifting beam - SWL 180 t

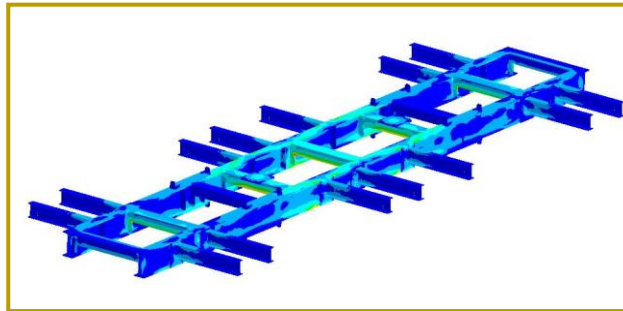


Damper frame - SWL 10 t

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Design



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Manufacturing



Custom lifting beam for transformer replacement



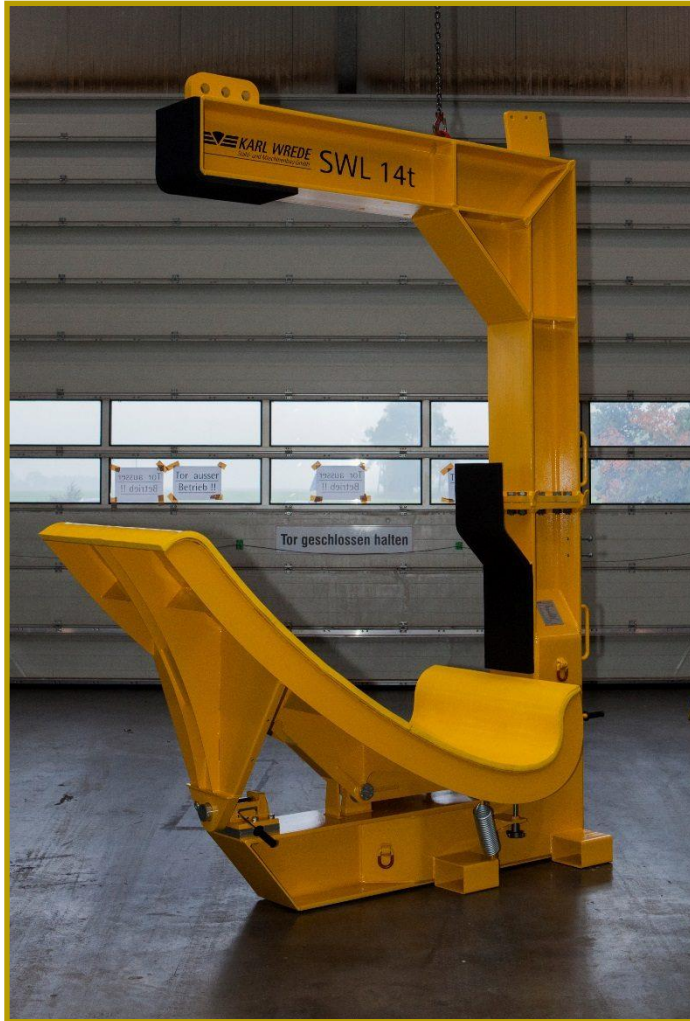
Rotor star lifting beam - SWL 50 t



Spreader beam for segmented tubular steel towers



Remote-controlled single-blade installation lifting beam



C-hook - rotor blade



Drive train lifting beam - SWL 83 t



Rotor lifting beam - 100 t



Rotor star lifting beam - SWL 180 t



C-hook - SWL 110 t



Rotor star lifting beam - SWL 70 t



Custom lifting beams - SWL 38.5 t



Positioning lifting beam - SWL 1.5 t



Spreader beam - SWL 280 t and tower lifting device - SWL 180 t



Spreader beam - SWL 280 t and tower lifting device in operation



250 t installation lifting beam with rotating H-beam and hydraulic centre-of-gravity adjustment



Nacelle lifting beam - SWL 480 t



Spreader beam - SWL 950 t



Remote-controlled installation lifting beam - SWL 650 t



Installation lifting beam - SWL 650 t in operation



Remote-controlled, fully automatic installation lifting beam - SWL 950 t

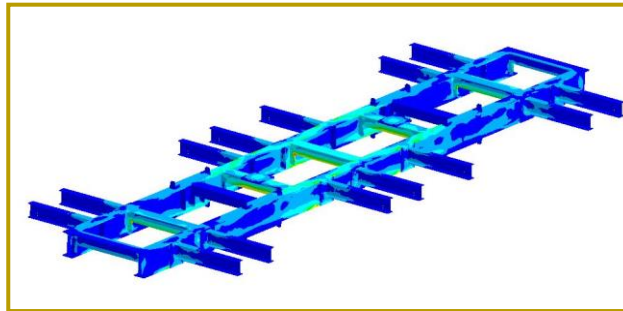


Remote-controlled, fully automatic installation lifting beam - SWL 950 t in operation

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Manufacturing



Transport frame for rotor shaft assembly



Wind turbine transport frame



Offshore flatrack



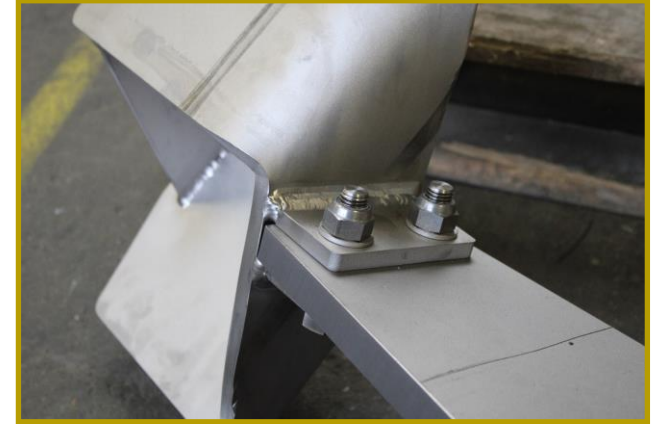
Rotor shaft retaining clamp - NORDEX N90



Roll-off restraints - WLL 460 t



Titanium agitator



WHAT SETS US APART AS A COMPANY?

- Family-owned company with flat hierarchies, direct communication and a hands-on mentality
- Innovative corporate management
- More than 65 years of successful company history
- In-house design department
- From bending to machining - everything from a single source
- Regionally unique machine fleet, including large-component machining
- Short response times and flexible emergency repair service
- Certified to DIN EN ISO 9001, DIN EN 1090-2 and -3 EXC 3, among others

THANK YOU FOR YOUR ATTENTION!



DO YOU HAVE ANY QUESTIONS?