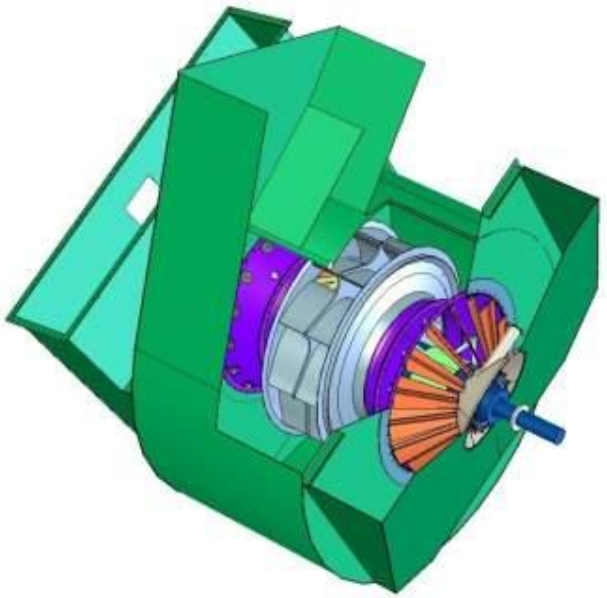
Custom Designed Products for Power Generation

Mechanical and Aerodynamic Calculations & Testing

- FEA to verify stress levels
- Modal analysis to verify mode shapes and frequency
- Low cycle fatigue analysis
- Design resonance & critical speed calculations
- Torsional analysis
- Impact testing to verify modal frequencies
- Strain gauge testing to verify FEA results
- Overspeed Testing to verify workmanship



FläktWoods

Centrifugal Fan Testing and NDE

NDE & QA for each wheel manufactured

- M-T of all Wheel Welds
- U-T of Shafts
- Dynamically Balanced to ISO Gr. 6.3 or 2.5
- Thermal Stress Relief w Subsequent M-T (Option)

Welding per AWS Standards

- AWS D1.1 - static components
- AWS D14.6 - dynamic components
- Qualified welders

Other Components

- Fan Static Parts are individually assembled, dimension checked and match marked
- FW Q-A is responsible for accepting all testing
- Lube system is functionally tested
- Witness and Hold points can be established, within constraints of the manufacturing schedule.

FläktWoods

Axial Fan Testing and NDE

- Every Rotor spin tested as an assembly using the contract shaft & bearings
- Hydraulic/Lube system functionally tested
- Individual impellers dynamically balanced
- Each blade set moment-arm balanced
- Various NDE conducted for different components including:
  - Radiography of all blades and P-T of a sample of blades
  - P-T or M-T of shafts
  - U-T of shaft and impeller Outer Ring and Hub Ring Forgings
  - Visual inspection of all components
- Material certification for the rotor materials
- Fan Static Parts individually assembled, dimension checked and match marked
- FW Q-A is responsible for accepting all testing
- Witness and Hold points can be established, within constraints of the manufacturing schedule. The spin test is the most popular witness point

FläktWoods