

DFM AND FLOW OPTIMIZATION FOR 2.5 MW AXIAL STEAM TURBINE 8 - STAGE PRESSURE REDUCTION SYSTEM

THE CLIENT

A Europe-based client offering an array of customized solutions to power generation equipment along with performance guaranty.

THE BUSINESS NEED

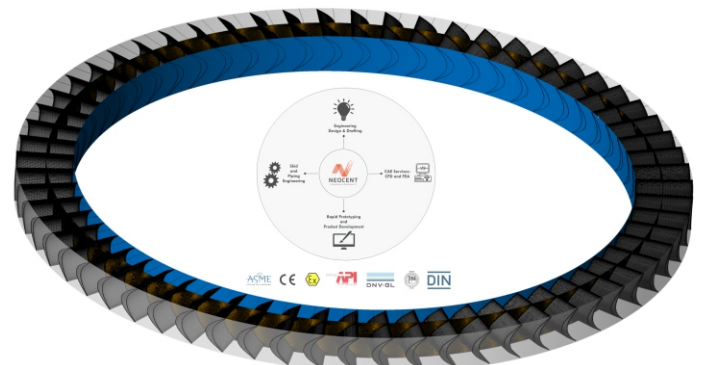
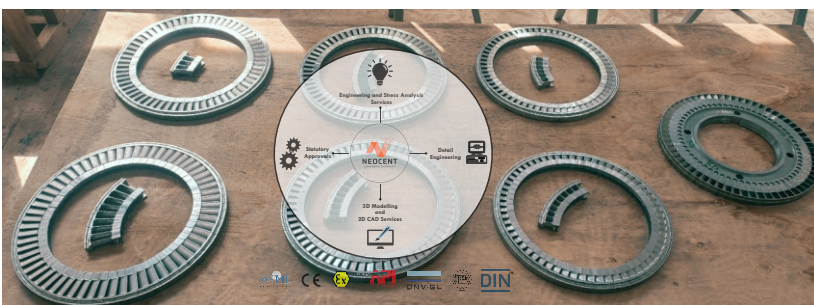
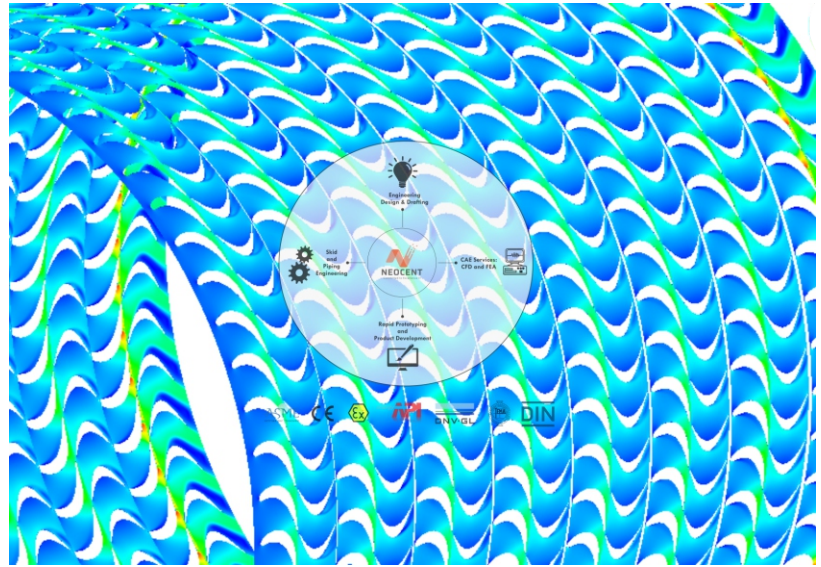
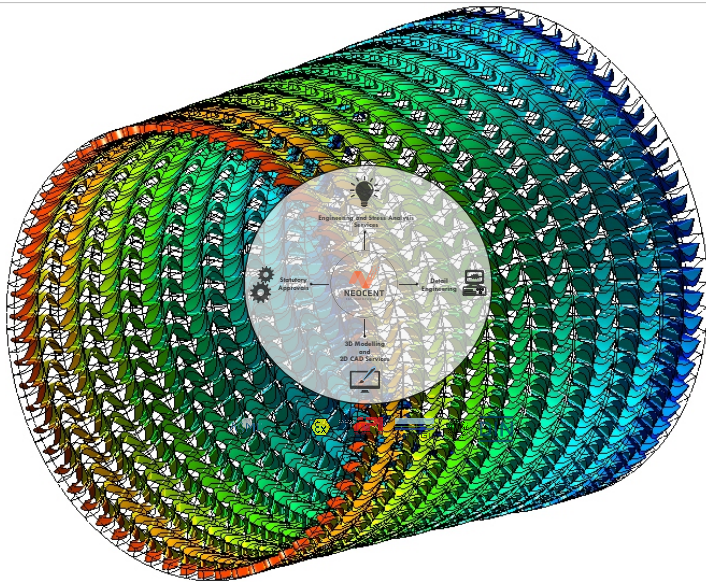
Our client was seeking engineering design assistance for a 2.5MW steam turbine with 8 stage pressure reduction. Client wanted Stress simulation and Flow simulation for whole system package along with boiler to turbine piping header and Exhaust hood CFD validation.

NEOCENT SOLUTION & DELIVERABLE

Detail Engineering : Mechanical design calculation, Thermal process design calculation, bearing selection, Shaft diameter optimization, Blade shape optimization, Mass-flowrate optimization.

CAD Detailing : G.A. Drawing , Details drawing ,3D Modeling.

Analysis : CFD simulation at each stage of the pressure reduction, CFD simulation on full 9-stage reduction system, CFD simulation from boiler to inlet of turbine stator section, CFD Turbine exhaust hood.



Neocent Engineering Services is a multi-discipline engineering services company. Established in 2015, we offer high-quality engineering support solutions to global EPC organizations across some of the industries listed: Automotive, Aerospace, Turbo machinery, Heavy engineering, HVAC, Oil & Gas, Material handling and Process industry.

Neocent provides detailed engineering services to EPC, EPCM, OEM, and PMC as long-term turnkey projects. Our EPCM services include Project Management, Feasibility Studies, Conceptual & Basic Engineering, Detailed Design, Procurement, Construction Management, Commissioning & Start-up, and Operations & Maintenance.

Neocent Engineering's service offering, include;

- Engineering and Stress Analysis Services
- Details Engineering
- 3D Modelling and 2D CAD Services
- Statutory Approvals

Neocent CFD Consulting Services

We provide the best and most comprehensive Computational Fluid Dynamics (CFD) analysis services. We excel in providing precise modelling to aid an accurate CFD analysis and propose effective engineering solutions.

Our Turbo machinery / Rotating machine CFD Analysis Services include:

- Centrifugal compressors
- Axial compressors
- Cooling fans
- Ventilation systems
- Radial blowers
- Cross-flow blowers
- Water pumps
- Water turbines

We help engineering design validate the geometry through virtual simulation prior to production and avoid last-minute hassles. To ensure accuracy in results, we also perform validity checks such as convergence analysis, boundary conditions review and hand calculations, allowing manufacturers to validate their designs faster.

In brief, clients come to us when they need high-quality work executed and documented to withstand the most rigorous reviews.

Contact Details

Email : sales@neocentengineering.com

Website : www.neocentengineering.com

Linked in : <https://www.linkedin.com/company/neocent-engineering>

India Contact : +91- 8000 860 806

Canada Contact : +1 (226)961-5067

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