

CFD Simulation on Valve with different opening and closing position to calculate Flow Co-efficient and Pressure Drop

THE CLIENT

A UAE- based client offering an array of customized solutions to Power, Pharmaceutical, Oil and gas, Offshore industries with customized valves.

THE BUSINESS NEED

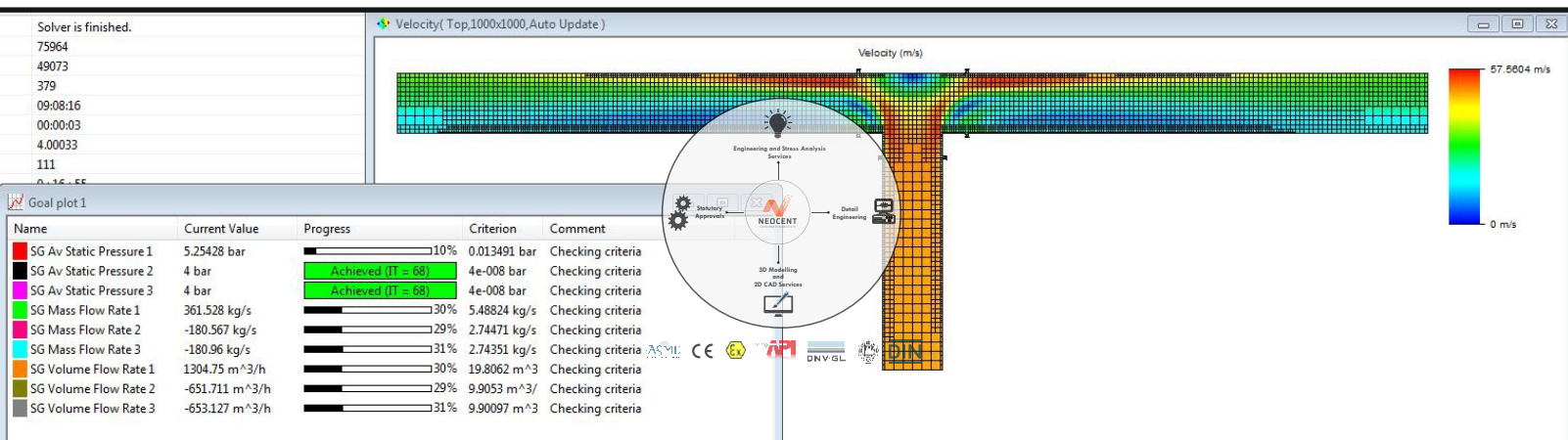
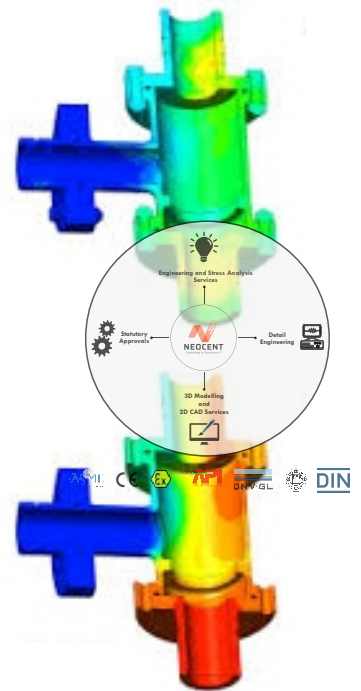
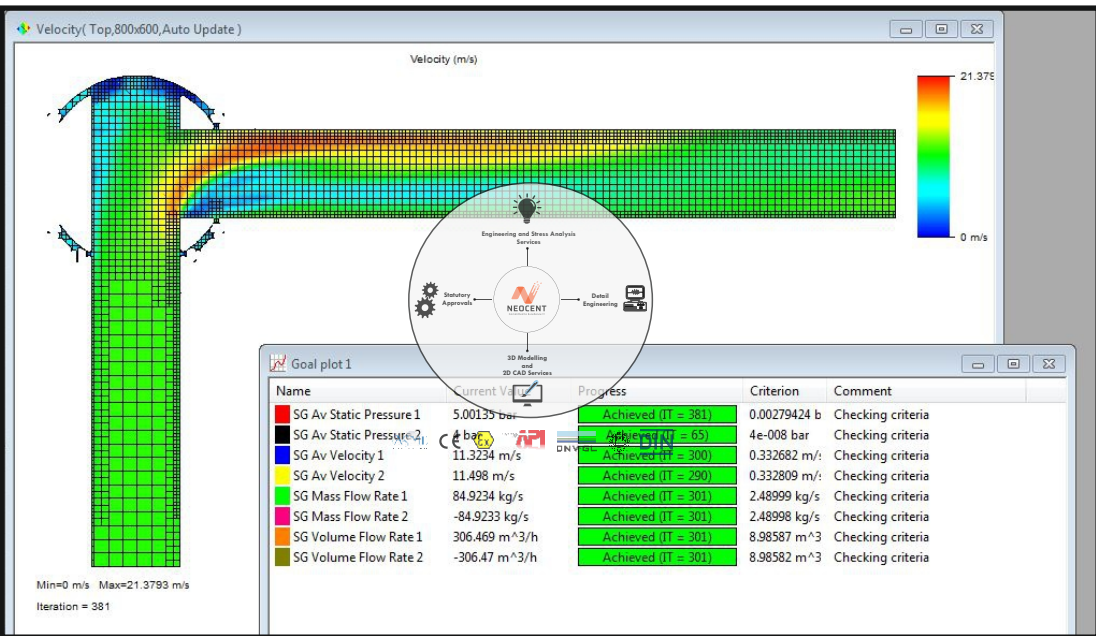
Our client was seeking engineering design assistance and performance guaranty through CFD simulation for valve.

NEOCENT SOLUTION & DELIVERABLE

Detail Engineering : Details Mechanical design as per ASME B16.34 and process design - Pressure drop - Flow Co-efficient calculation.

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

Analysis : CFD simulation with different valve opening and closing position, Pressure drop and flow co-efficient, Fluid-Solid (FSI) stress on valve body to evaluation critical location.



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:

- Aerodynamics Analysis
- CFD Combustion Analysis
- CFD Fluid-Structure interaction(FSI)
- CFD Heat Transfer Analysis
- CFD HVAC Analysis
- CFD Hydrodynamics Analysis
- CFD Multi phase Flow Analysis
- CFD Turbo-machinery Analysis

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.

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