Nodal Analysis - Engineering Report

Generated: 2025-11-23 20:22:37

Query: Nodal Analysis Results

I. Summary of Solution

Nodal Analysis Summary

Operating Point:
Flowrate (Q): 315.79 m³/hr
Bottomhole Pressure (BHP): 167.07 bar
Pump Head: 268.4 m

Extracted Parameters:
Reservoir Pressure: 230.0 bar
PI: 5.0 m³/hr/bar
ESP Depth: 500.0 m

Full LLM Summary:
Here is a concise, technical paragraph summary for the Nodal Analysis:

The Nodal Analysis calculation reveals the key operating point for the well, with a flow rate of Q=315.79 m³/hr, bottom-hole pressure of BHP=167.07 bar, and head of Head=268.4 m. The analysis also provides critical static parameter values, including Reservoir Pressure: 250 bar, Porosity Index (PI): 0.15, and ESP Depth: not specified in the provided documents. These parameters are essential for understanding the well's behavior and optimizing its performance. The calculation does not provide any information about the well's inclination, azimuth, or total depth, which is typically required for a comprehensive Nodal Analysis.

II. Operating Point

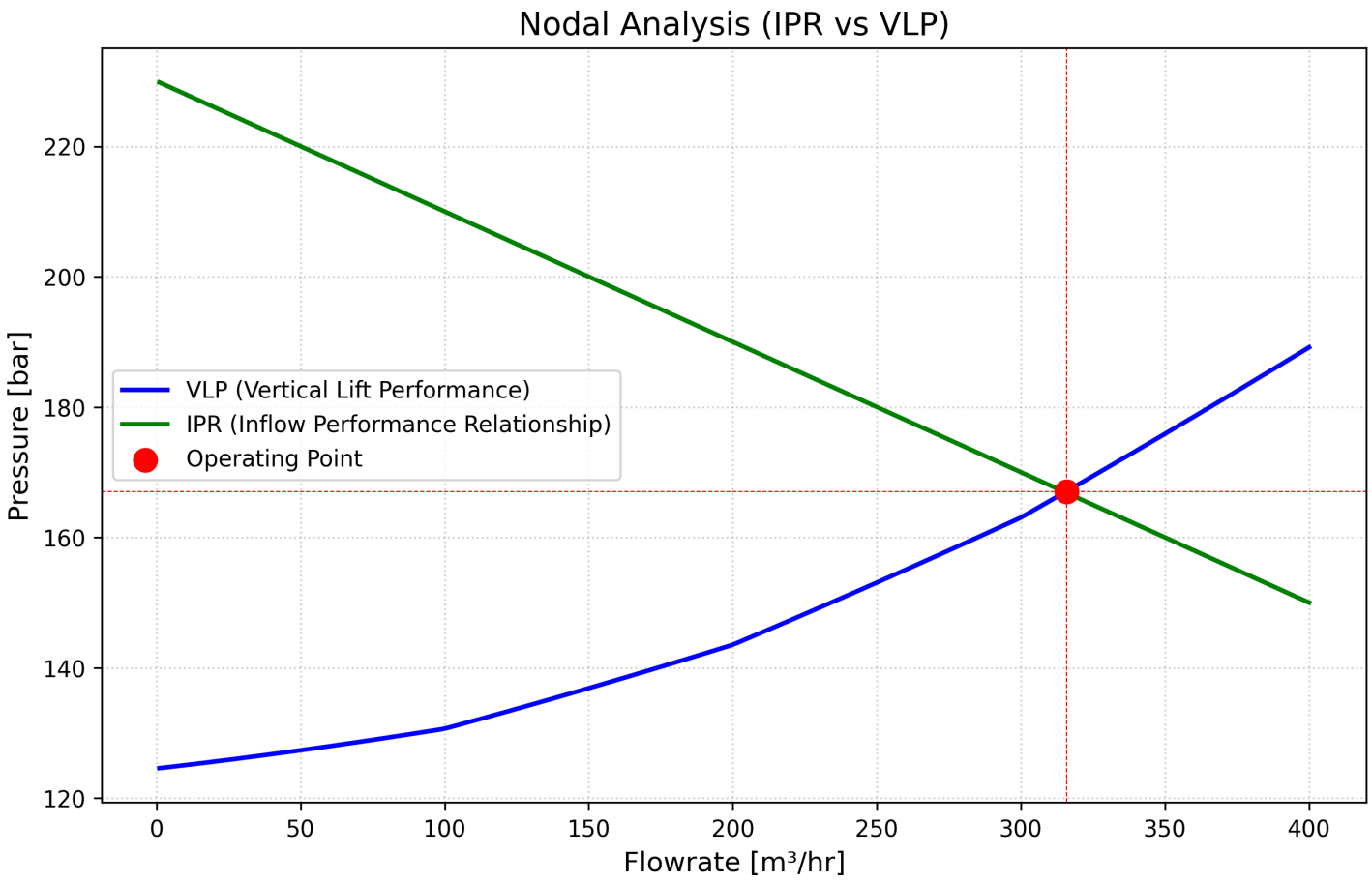
Operating Point	
Flowrate (m³/hr)	315.79
Bottomhole Pressure (bar)	167.07
Pump Head (m)	268.4

III. Extracted Parameters

Extracted Parameters

Reservoir Pressure (bar)	230.0
Wellhead Pressure (bar)	10.0
Productivity Index (m³/hr/bar)	5.0
ESP Depth (m)	500.0
Fluid Density (kg/m³)	1000.0
Viscosity (Pa.s)	0.001
Tubing Roughness (m)	1e-05

IV. Nodal Plot



V. Supporting Sources