From pressure calculation to selected nominal wall: a numerical example

ASME B31.3 Process Piping — Engineering Requirements for Process Piping

https://niktrd.com/asme-b31-3

Step	Equation/input	Result	Interpretation
Pressure design wall	t = PD / [2(SEW + PY)]	≈ 2.41 mm	Pressure-only wall for the stated assumptions
Add corrosion allowance	2.41 + 1.50	≈ 3.91 mm	Design need before negative mill tolerance
Effect of 12.5% negative tolerance	3.91 / 0.875	≈ 4.47 mm	Minimum nominal wall for this example
Comparison with ASME B36.10M	NPS 6: SCH 10 = 3.40 mm; SCH 40 = 7.11 mm	SCH 10: Not acceptable / SCH 40: Acceptable	Schedule is the commercial dimensional selection after calculation