Amine Corrosion Calculation for Asset ID Amine Demo

Asset Name/ID
Amine Demo

Select Material
Please select the material
Carbon Steel or low alloy

Temperature (°F)
Input system temperature 190°F≤T≤270°F
212

Acid Gas Loading (mol/mol)
Acid Gas Loading (0.1≤AGL≤0.7 for CS or low alloys), or mole of Acid Gas per mole of Amines in the system.
0.5

Velocity ft/s
Linear Bulk Velocity (m/s). For carbon steel/low alloy, common velocity limits for transition between general to pitting corrosion are about 1.52 m/s (5 ft/s) for rich amine and about 6.01 m/s (20 ft/s) for lean amine.
5

Amine concentration (wt%)
2

Heat Stable Amine Salts (HSAS, %wt)
HSAS concentration (2≤HSAS≤4 for MEA/DEA in CS)
3

Corrosion Rate (mm/yr)
0.41 mm/yr

Corrosion Rate (mpy)
16.13 mpy

Corrosion Damage Morphology
General thinning

Remaining Life and Next Inspection Date Calculation

Corrosion Rate (overwritten)

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Corrosion Rate Overwritten by the user
Yes

Corrosion Rate (overwritten) mpy
Corrosion rate used for the calculation
10

Material Thickness Units
Units of the thickness
in

T Actual
Current thickness of the material
0.5

T Required
Minimum required thickness for safe operation
0.4

Selected Date
Start date of the remaining life
Thu Jul 24 2025

Remaining Life years/Retirement date
10.00 / Tue Jul 24 2035

Do you want to estimate the next inspection date?
Next inspection date
Yes

Inspection Type
Selected standard for inspection
Piping (API 570)

Piping Asset Class
Piping Asset Class
Class 2 or 3

Recommended next inspection date based on t actual date
Recommended next thickness measurement date (one-half remaining life or maximum interval per piping type of circuit class, whichever is less)
Wed Jul 24 2030