

Alkine Sour Water Corrosion Calculation for Asset ID ssss

Asset Name/ID

SSSS

H₂S concentration in system

It is suggested to determine NH_4HS value with ionic process models. However, approximate values may be calculated from API 581 Table 2.B.7.1

1.50 wt%

NH₃ concentration in system

It is suggested to determine NH_4HS value with ionic process models. However, approximate values may be calculated from API 581 Table 2.B.7.1

4.00 wt%

NH₃ concentration in system

Determine the concentration of the H_2SO_4 present in this equipment/piping. If analytical results are not readily available, it should be estimated by a knowledgeable process engineer

2.25 wt%

Stream Velocity

The vapor phase velocity should be used in a two-phase system. The liquid phase velocity should be used in a liquid full system.

5.00 m/s

%mol H₂S in the system

1.50 %

System pressure

Fill the Total system pressure psia

120.00 psia

H₂S partial pressure

Fill the Total system pressure KPa

30.00 psia

Baseline CR mm/yr

0.12 mm/yr

Baseline CR mpy

4.59 mpy

Adjusted CR mm/yr

0.92 mm/yr

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Adjusted CR mpy

36.17 mpy

Corrosion Damage Morphology

General thinnig

Remaining Life and Next Inspection Date Calculation

Corrosion Rate (overwritten)

Corrosion Rate Overwritten by the user

Yes

Material Thickness Units

Units of the thickness

in

T Actual

Current thickness of the material

0.9

T Required

Minimum required thickness for safe operation

0.85

Selected Date

Start date of the remaining life

Tue Apr 01 2025

Remaining Life years/Retirement date

1.38 / Wed Aug 19 2026

Do you want to estimate the next inspection date?

Next inspection date

Yes

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)

Thu Apr 01 2027

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Piping Asset Class

Piping Asset Class

Class 1