

## Alkine Sour Water Corrosion Calculation for Asset ID sddsa

### Asset Name/ID

sddsa

### H<sub>2</sub>S concentration in system

*It is suggested to determine NH<sub>4</sub>HS value with ionic process models. However, approximate values may be calculated from API 581 Table 2.B.7.1*

1.50 wt%

### NH<sub>3</sub> concentration in system

*It is suggested to determine NH<sub>4</sub>HS value with ionic process models. However, approximate values may be calculated from API 581 Table 2.B.7.1*

4.00 wt%

### NH<sub>3</sub> concentration in system

*Determine the concentration of the H<sub>2</sub>SO<sub>4</sub> 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 H<sub>2</sub>S in the system

1.50 %

### System pressure

*Fill the Total system pressure psia*

120.00 psia

### H<sub>2</sub>S partial pressure

*Fill the Total system pressure KPa*

20.00 psia

### Baseline CR mm/yr

0.12 mm/yr

### Baseline CR mpy

4.59 mpy

### Adjusted CR mm/yr

0.00 mm/yr

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### Adjusted CR mpy

0.00 mpy

### Corrosion Damage Morphology

General thinnig

## Remaining Life and Next Inspection Date Calculation

### Corrosion Rate (overwritten)

*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*

0.9

### 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

5.00 / Mon Apr 01 2030

### Do you want to estimate the next inspection date?

*Next inspection date*

Yes

## Alkine Sour Water Corrosion Calculation for Asset ID sddsa

### 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)*

Fri Oct 01 2027

### Piping Asset Class

*Piping Asset Class*

Class 2 or 3