

Corrosion Modeling Software and Corrosion Prediction
Software Series

H2SO4-Compass®: H2SO4 Corrosion Modeling and Prediction

High-Value Software Solutions to Costly Corrosion

Version 9.23

★ **Performance** ★ **Functionality** ★ **Usability**



Anytime Anywhere Any Device Any OS
No USB dongles No installation No Browser Plug-ins

Contact Us for Licensing Details

Why WebCorr | Performance Guarantee | Unparalleled Functionality | Unmatched Usability | Any Device Any OS | Free Training & Support | CorrCompass

Overview of H2SO4-Compass

H2SO4-Compass is the only device and OS independent predictive software on the market for the modeling and prediction of corrosion by sulphuric acid. Designers, engineers, consultants, maintenance and inspection personnel can quickly assess and quantify the impact of process variables on the sulphuric acid corrosion rate and the remaining life of piping, vessels, and other equipment handling sulphuric acid.

Figures below demonstrate the operation of H2SO4-Compass. With H2SO4-Compass, corrosion prediction and materials selection for sulphuric acid service are as easy as 1-2-3.

- (1) Select the material from the dropdown list,
- (2) Enter temperature, concentration, and velocity of sulphuric acid,
- (3) Review the prediction results

H2SO4-Compass predicts the specific gravity, the freezing point, and the boiling point of the sulphuric acid, the acid concentration in vapor phase, the corrosion rate of the selected alloy at the specified temperature and concentration, and the remaining life of the component. In addition to that, H2SO4-Compass also plots the isocorrosion diagram for the selected alloy so as to give users a complete picture of the corrosion behavior of the selected alloy across the entire range of the sulphuric acid concentration and the service temperature.

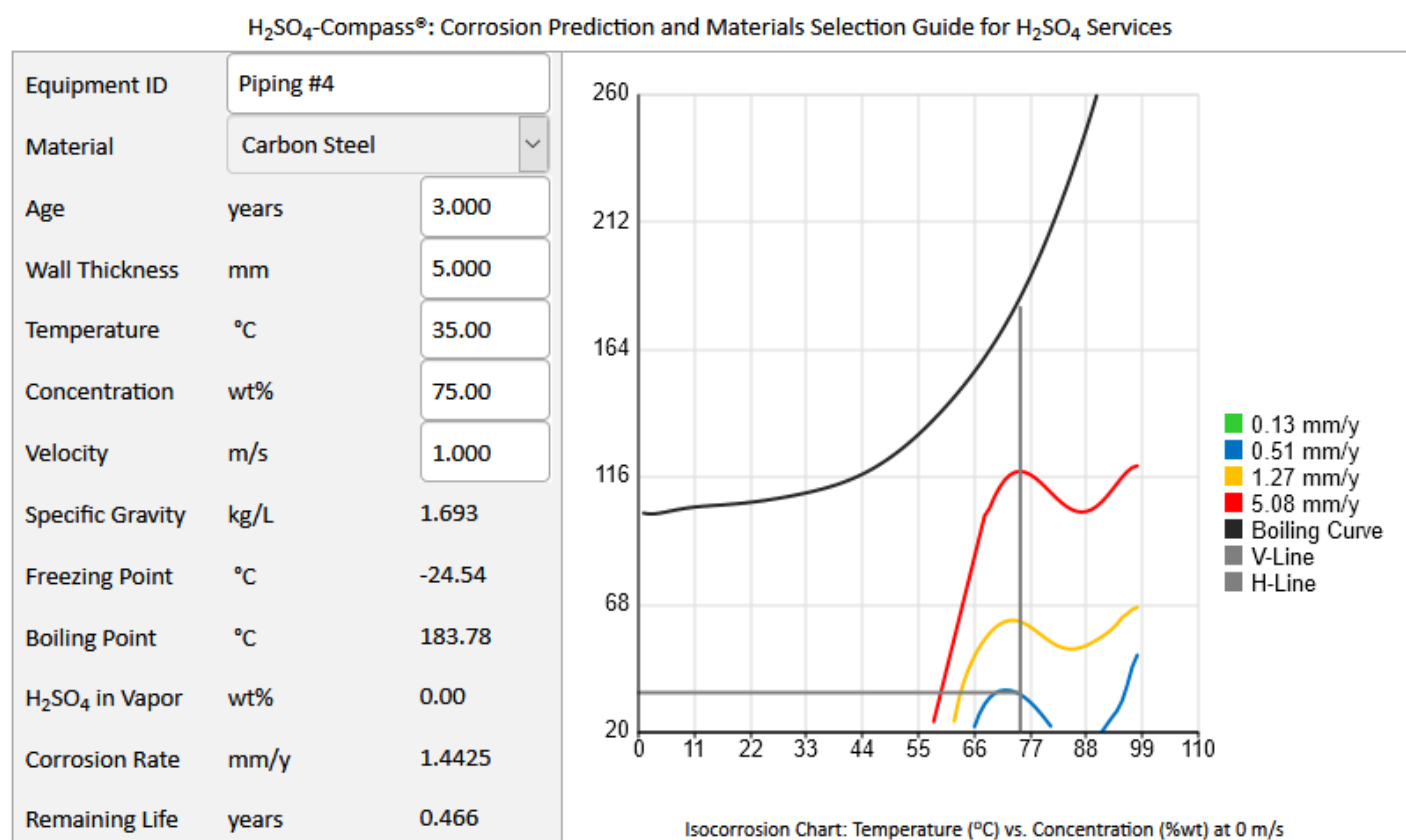


Figure 1 H2SO4-Compass Corrosion Prediction and Materials Selection Guide for Sulphuric Acid Services

H₂SO₄-Compass®: Corrosion Prediction and Materials Selection Guide for H₂SO₄ Services

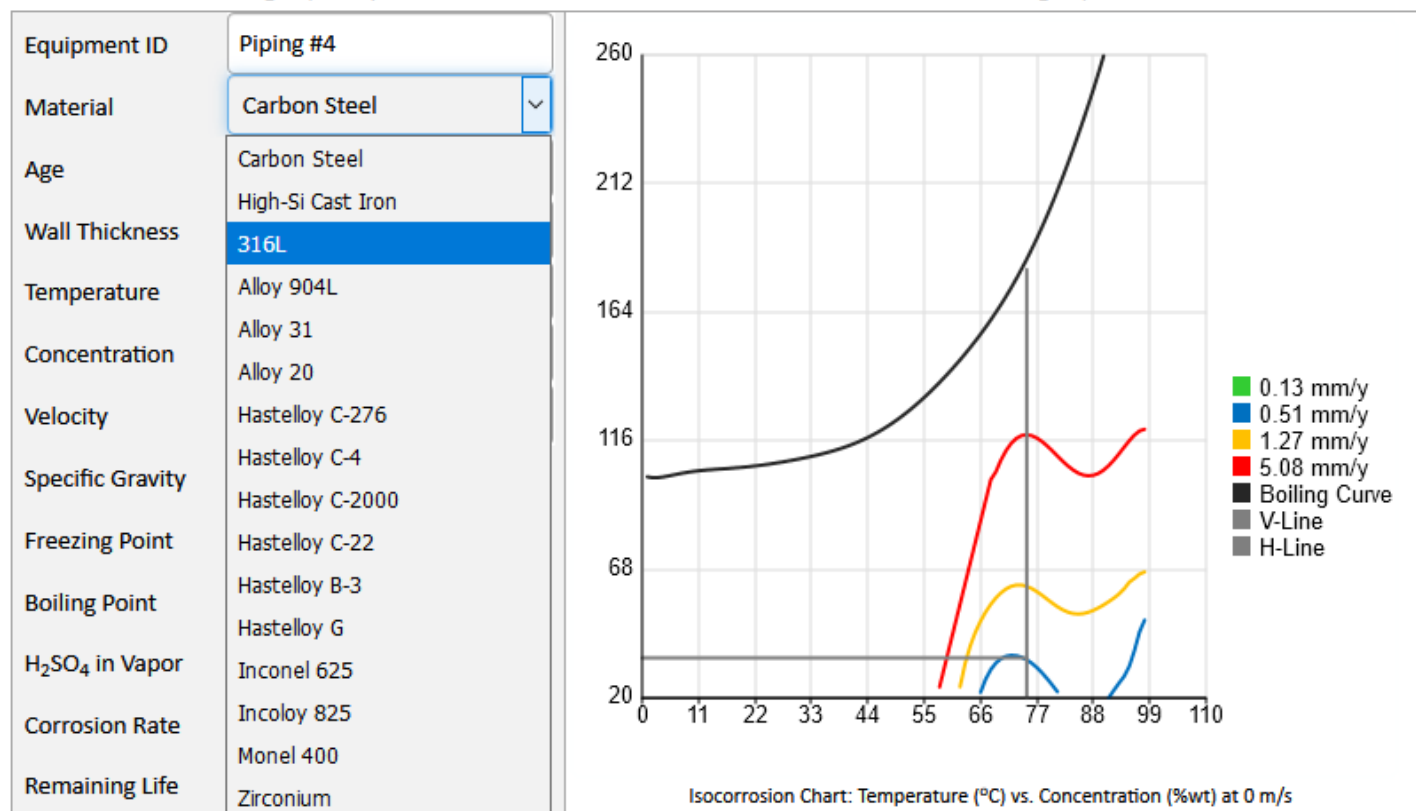


Figure 2 H₂SO₄-Compass H₂SO₄ Corrosion Prediction and Materials Selection Guide for Sulphuric Acid Services

Under the prevailing conditions in Figure 1 above, carbon steel corrodes at 1.4425 mm/y, making it not a suitable material for the specified operating conditions. Figure 3 shows the performance of Zirconium under the same condition, with a significantly reduced corrosion rate of 0.025 mm/y.

H₂SO₄-Compass®: Corrosion Prediction and Materials Selection Guide for H₂SO₄ Services

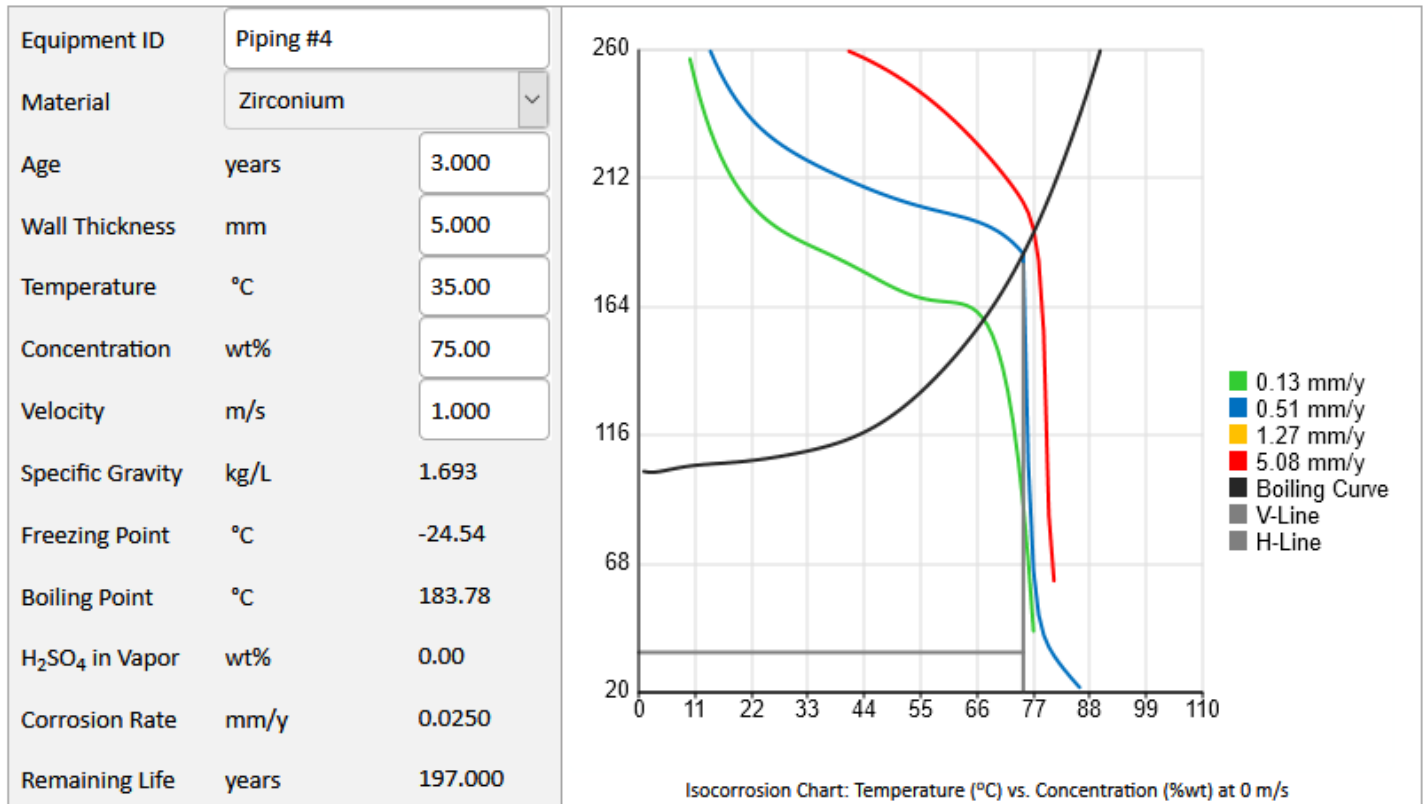


Figure 3 H₂SO₄-Compass H₂SO₄ Corrosion Prediction and Materials Selection Guide for Sulphuric Acid Services

The following materials for sulphuric acid service are included in the database of H₂SO₄-Compass:

Carbon Steel

High Silicon Cast Iron (HSCI)

Type 316L stainless steel

Alloy 904L

Alloy 31

Alloy 20

Hastelloy C-276

Hastelloy C-4

Hastelloy C-2000

Hastelloy C-22

Hastelloy B-3

Hastelloy G

Inconel 625

Incoloy 825

Monel 400

Zirconium

If you cannot find the material of your interest in the list above, do let us know through the [Contact Us](#) link and we will conduct the necessary research and tests to generate the required data for inclusion in the software, free of charge for licensed users of H2SO4-Compass.

H2SO4-Compass's powerful applications are immensely useful for engineering design, remaining life prediction, and materials selection for sulphuric acid services.

[Click here to contact us for licensing details and experience the power of H2SO4-Compass.](#)

H2SO4-Compass gives you the right directions in H2SO4 corrosion prediction and materials selection.

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