

Corrosion Modeling Software and Corrosion Prediction Software

DewPoint-Compass®: Prediction of Dew Point Temperatures and the Risk of Dew Point Corrosion

The Ultimate Software Solution To The Costly Dew Point Corrosion

Version 9.20

☆ Performance ☆ Functionality ☆ Usability



Anytime

Anywhere

Any Device

Any OS

No USB dongles

No installation

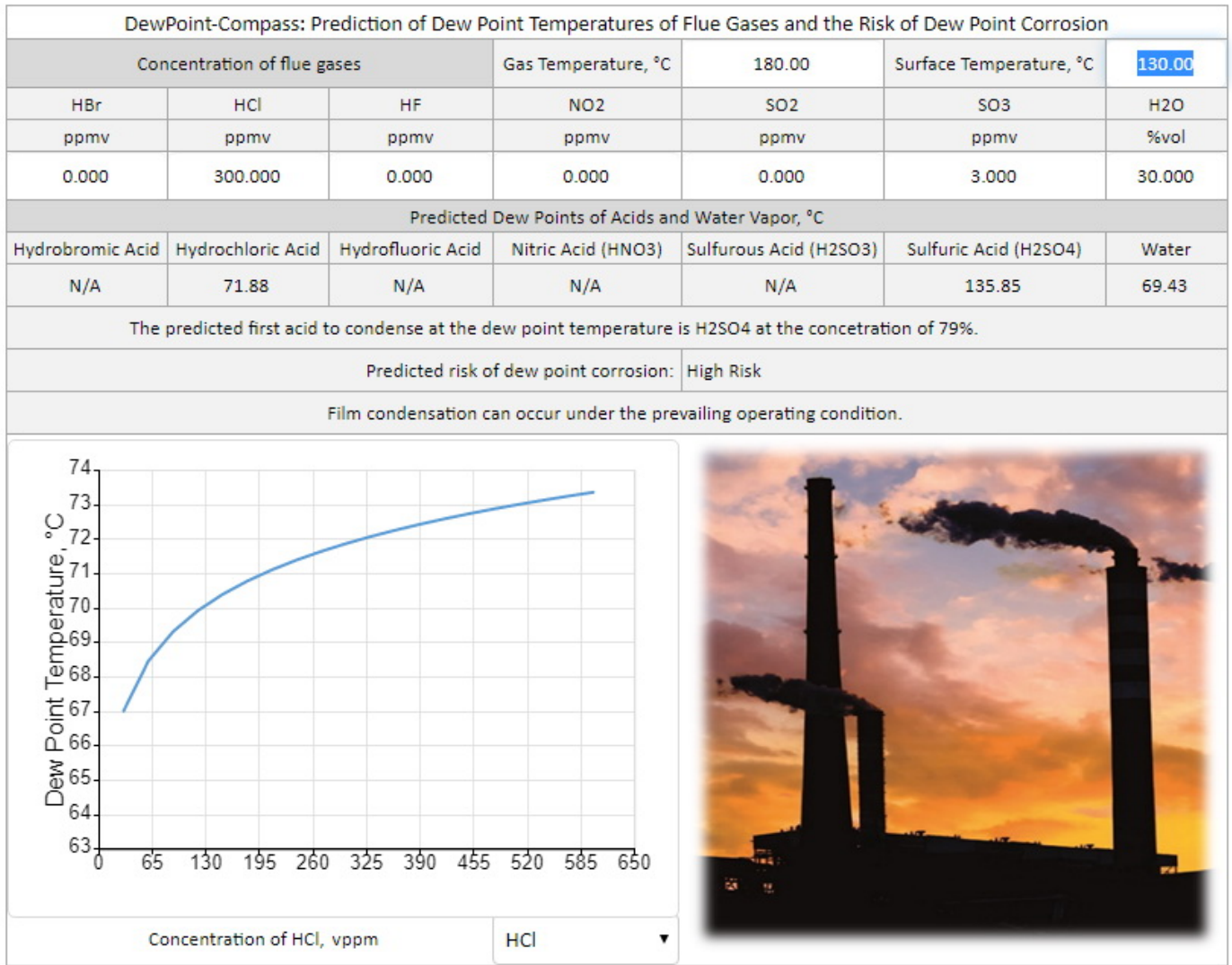
No Browser Plug-ins

Overview and Application Examples of DewPoint-Compass Software for Dew Point Corrosion Prediction

DewPoint-Compass is the only device and OS independent software tool on the market for the prediction of dew point temperatures of flue gases and the risks of dew point corrosion.

Designers, OEM engineers, consultants, operation personnel, maintenance and inspection engineers can quickly determine the dew point temperatures of flue gases and the risk rankings of dew point corrosion, anytime, anywhere, on any device running any OS without the need to install or download anything. DewPoint-Compass also predicts the modes of condensation (mist condensation, film condensation or both) and the concentration of the first condensed acid at the dew point temperature.

Figures below show the screen shots of DewPoint-Compass.



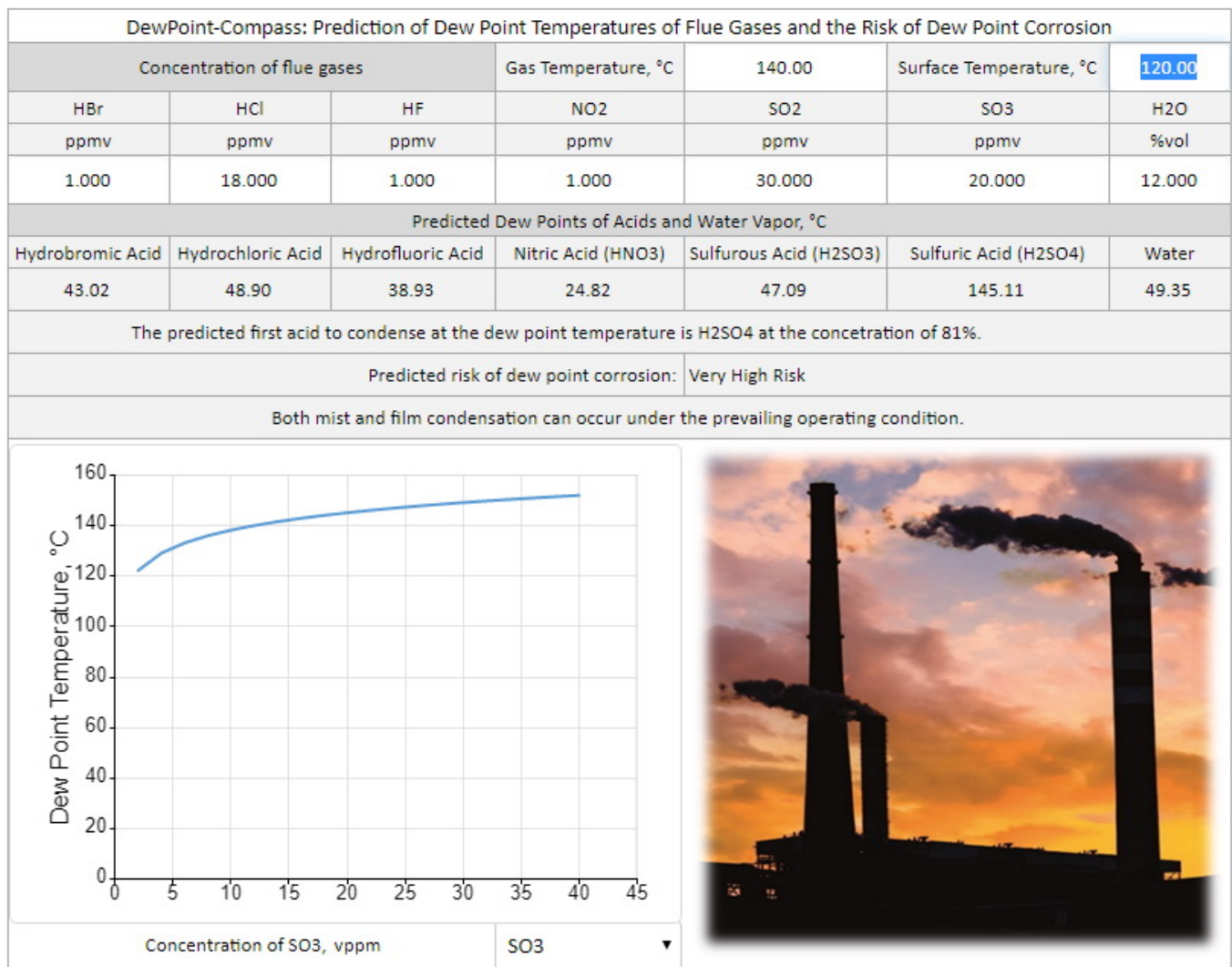
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Figure 1 DewPoint-Compass Predicts the dew point temperatures of flue gases and the risk of dew point corrosion.

Under the prevailing operating conditions shown in Figure 1 above, the dew point temperatures of Flue Gases including SO3, SO2, HCl, HBr, HF, NO2 and water vapor are predicted. The predicted dew point temperature for hydrochloric acid is 71.88°C and for sulfuric acid is 135.85°C. Dew-Point-Compass also predicts that the first condensed acid is sulfuric acid and its concentration is 79%. The risk of dew point corrosion at the prevailing operating conditions is predicted to be "high" and that the mode of condensation is film condensation on the internal wall surface of equipment/structure.

The effect of the concentration of the flue gases on the dew point temperature is plotted at the bottom left of the screen. Users of DewPoint-Compass can quickly assess the impact of flue gas composition on the risk of dew point corrosion.

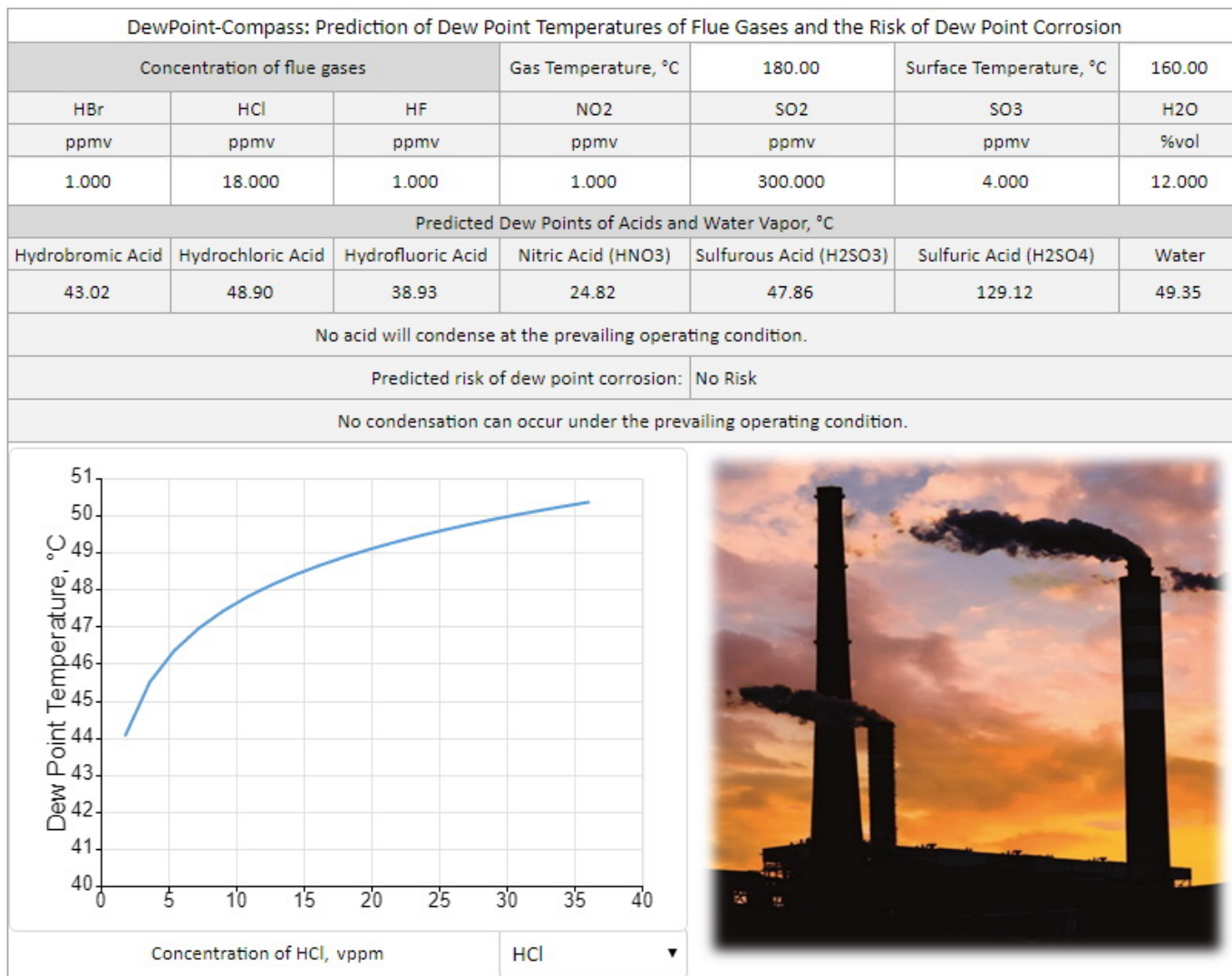
Under the prevailing operating conditions in Figure 2, DewPoint-Compass predicts that both mist and film condensation can occur to the equipment/structure and the risk of dew point corrosion is "very high".



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Figure 2 DewPoint-Compass Predicts Dew Point Temperatures and The Modes of Condensation.

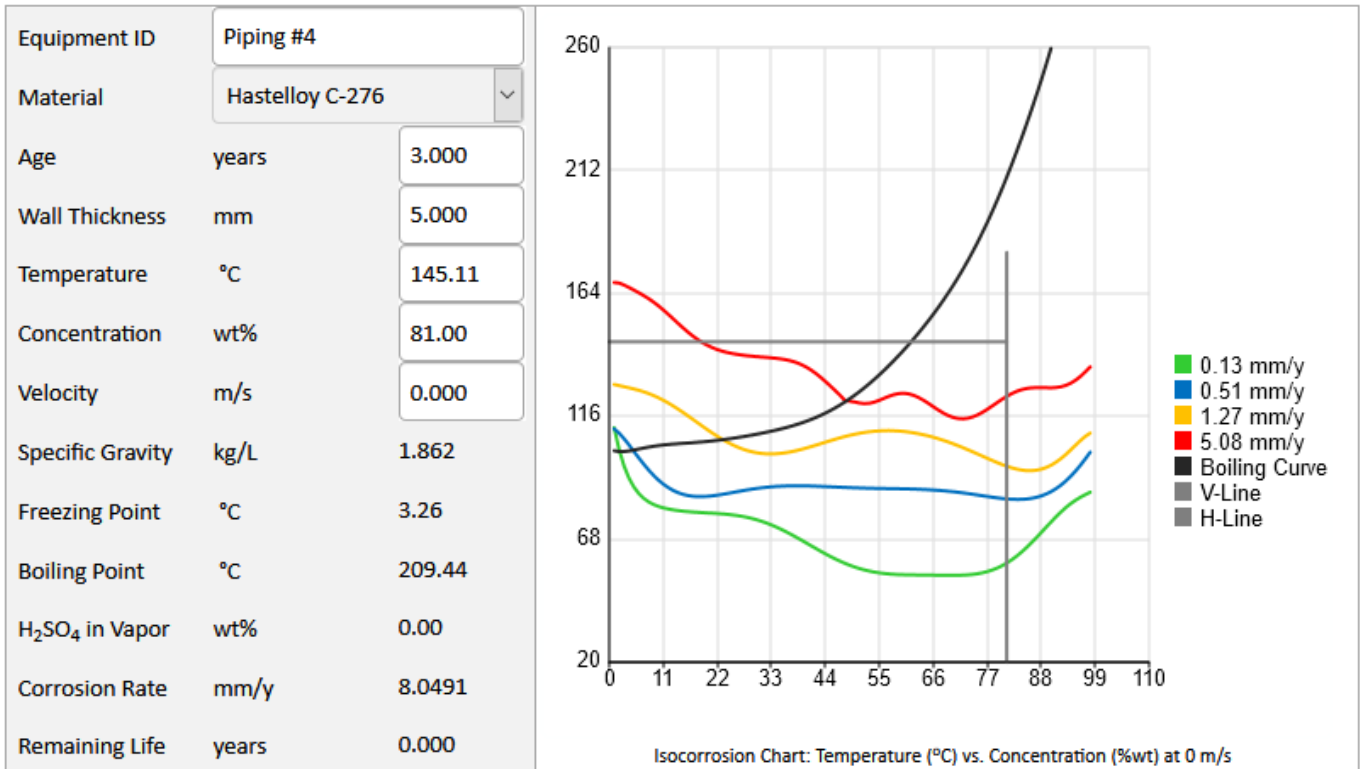
Under the prevailing operating conditions shown in Figure 3, there is no risk of dew point corrosion.



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Figure 3 DewPoint-Compass Predicts Dew Point Temperatures and The Risk of Dew Point Corrosion.

Since DewPoint-Compass predicts both the dew point temperature and the concentration of the first condensed acid, it integrates seamlessly with H2SO4-Compass for the materials selection and the prediction of the corrosion rate. For example, under the prevailing operating conditions in Figure 2 above, the dew point temperature of SO3 is 145.11°C and that the first condensed sulfuric acid (H₂SO₄) is 81%. Using these numbers as inputs in H2SO4-Compass (Figure 4), the corrosion rate of alloy C-276 is predicted to be 8.049 mm/y. Please refer to this link for details on H2SO4-Compass.



H₂SO₄-Compass® Version 9.20 © 1995 ~ 2020 WebCorr Corrosion Consulting Services

Figure 4 DewPoint-Compass Integrates with CRA-Compass to Predict the Rate of Dew Point Corrosion.

The powerful applications of DewPoint-Compass (and H₂SO₄-Compass) are truly unlimited in engineering design, dew point corrosion prediction and dew point corrosion risk assessment, materials selection, trouble-shooting process-related issues and failure analysis of components and systems.

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

DewPoint-Compass, giving you the right directions in Dew Point Prediction and Dew Point Corrosion Risk Assessment