

Corrosion Modeling Software and Corrosion Prediction Software Series

ISO15156-Compass®: Modeling and Prediction of in-situ pH, Region of Environmental Severity, and Susceptibility to Sulfide Stress Cracking (SSC) of Carbon and Low Alloy Steels

High-Value Software Solutions to Costly Corrosion

Version 12.4

★ Performance ★ Functionality ★ Usability



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

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

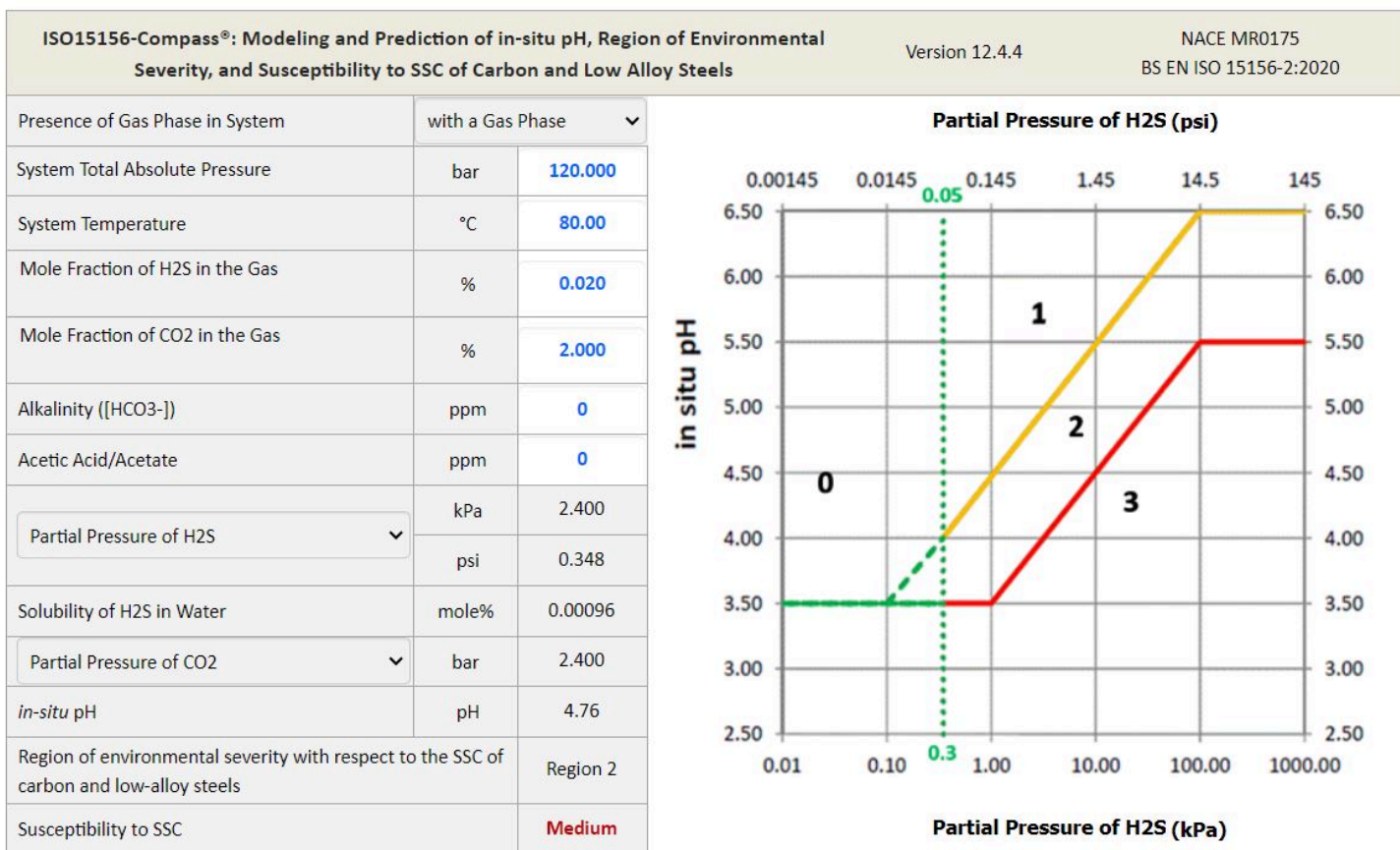
Overview of ISO15156-Compass

ISO15156-Compass models and predicts in-situ pH, regions of environmental severity, and susceptibility to sulfide stress cracking (SSC) of carbon and low alloy steels in accordance with NACE MR0175 / BS EN ISO 15156-2:2020 "Petroleum and natural gas industries - Materials for use in H₂S-containing environments in oil and gas production, Part 2: Cracking-resistant carbon and low-alloys steels, and the use of cast irons".

ISO15156-Compass models the effects of H₂S partial pressure, CO₂ partial pressure, system temperature, alkalinity of produced fluid, and acetic acid/acetate on the in-situ pH, solubility of H₂S, regions of environmental severity, and the susceptibility to sulfide stress cracking (SSC) of carbon and low alloy steels. Using ISO15156-Compass is as easy as 1-2-3:

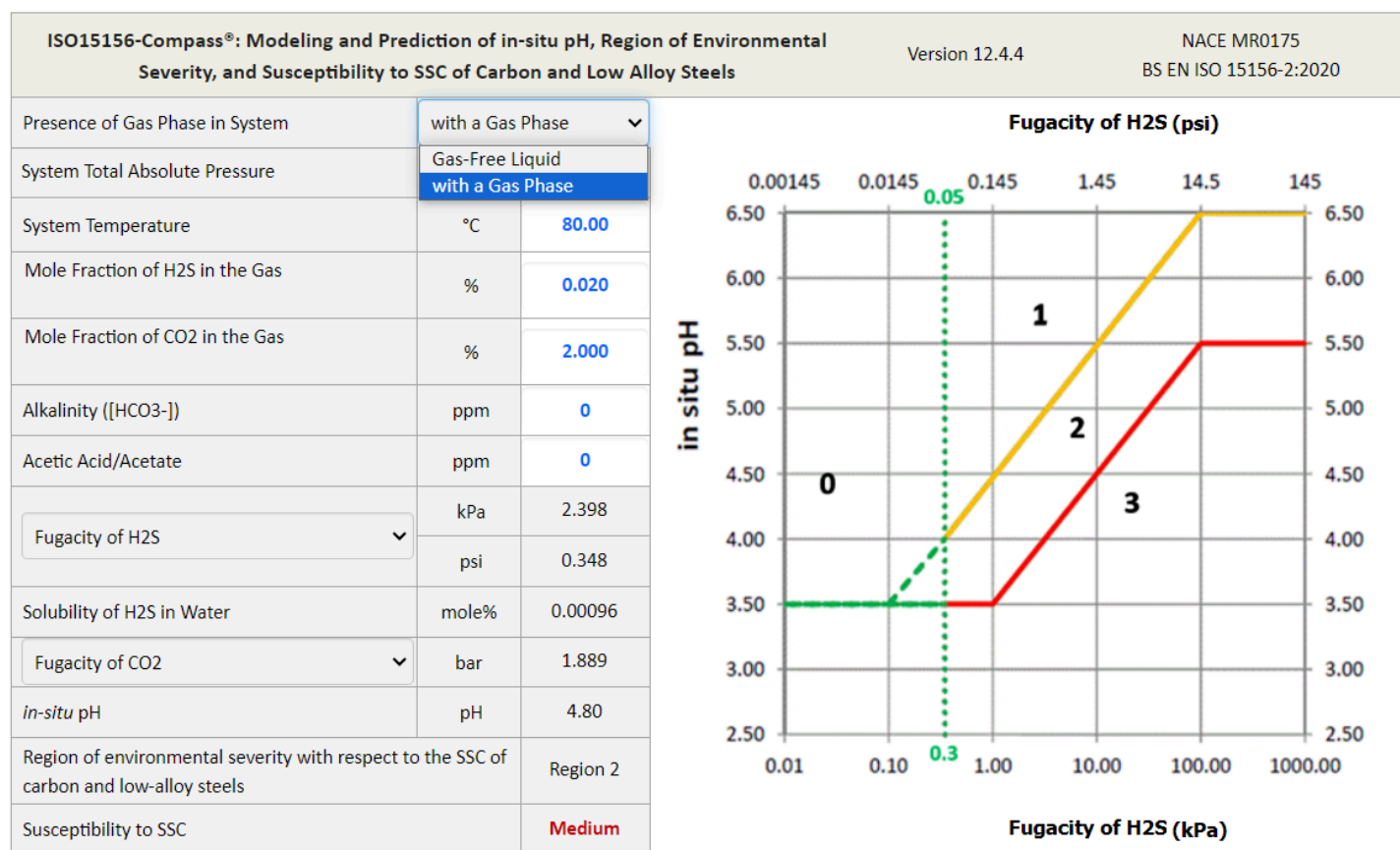
- (1) select the production system (gas-free liquid system or system with a gas phase),
- (2) enter the production data,
- (3) review the modeling and prediction results

Figures below show the screen shots.



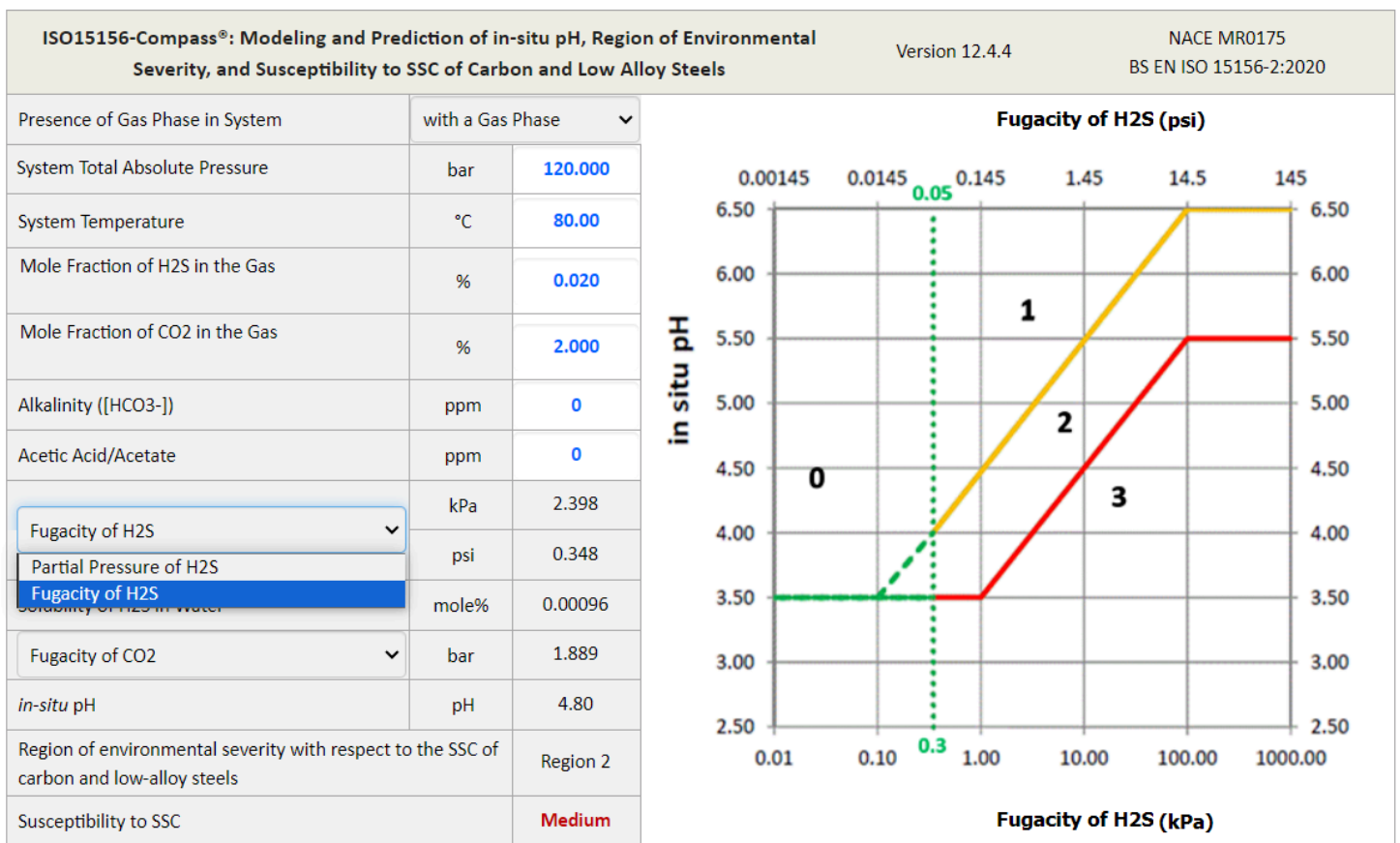
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Figure 1 Modeling and Prediction of in-situ pH, Regions of Environmental Severity, and Susceptibility to SSC



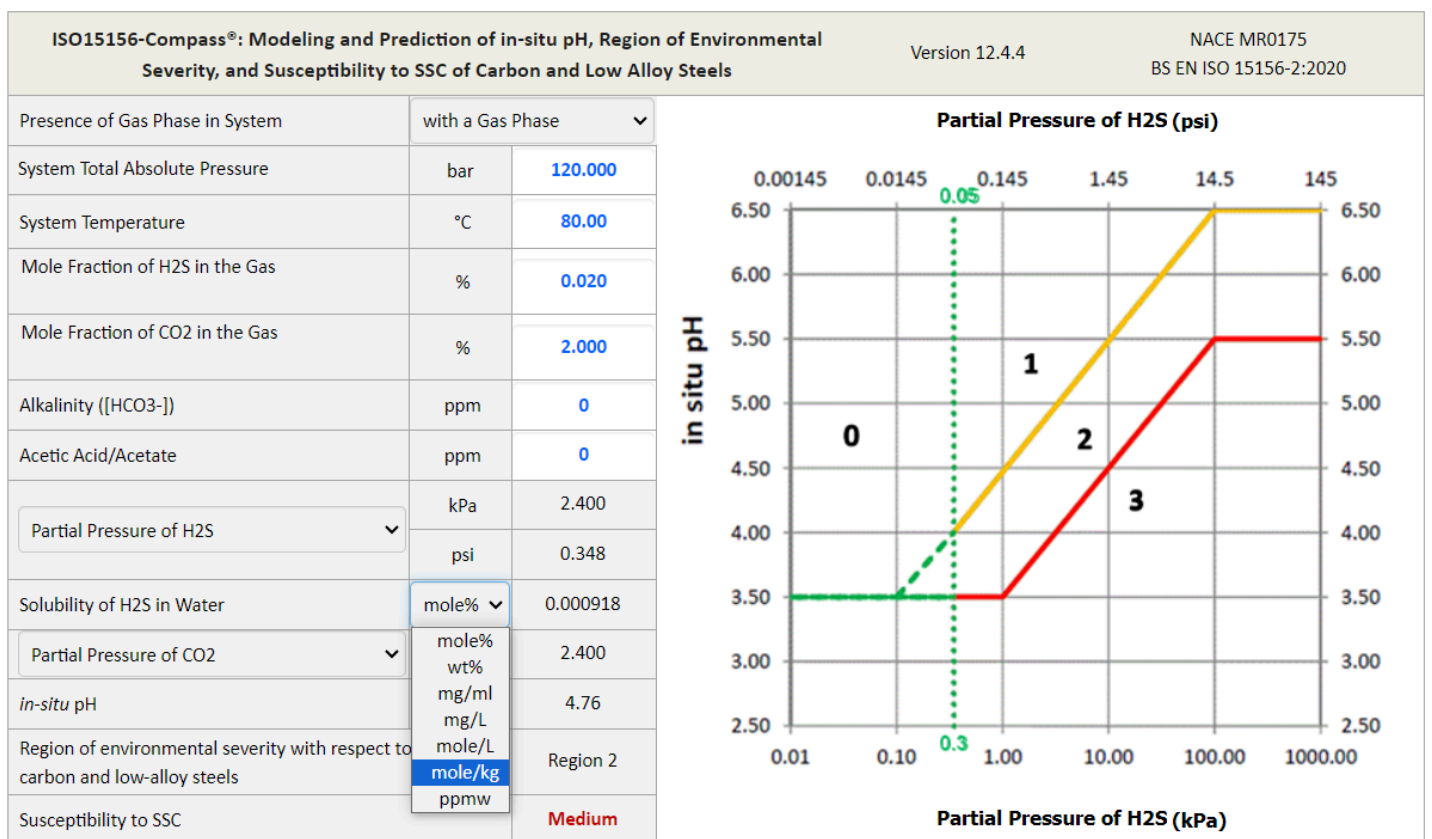
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Figure 2 ISO15156-Compass works for both gas-free liquid systems and systems with a gas phase



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Figure 3 ISO15156-Compass gives user the option to use fugacity instead of partial pressure in the modeling and prediction of in-situ pH, region of environmental severity, and SSC susceptibility.



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Figure 4 ISO15156-Compass predicts the solubility of H2S in water under the prevailing operating conditions.

Since the publication of ISO 15156-2:2015/Cir.1:2017 Annex C, users may employ H2S fugacity rather than partial pressure for characterization of the severity of the production environment. It is understood that these modern sour severity metrics may better represent the true chemical activity of H2S at high total pressures, compared to the traditional partial pressure metric.

ISO15156-Compass gives users the option to use H₂S fugacity or H₂S partial pressure in the assessment of the environmental severity. ISO15156-Compass software also predicts the dissolved H₂S in the water phase under the prevailing operating conditions, with a user preferred H₂S concentration unit: mole%, wt%, mg/ml, mole/L, mole/kg, and ppmw.

The powerful applications of ISO15156-Compass are truly unlimited in engineering design, corrosion prediction and materials selection for oil and gas production systems.

[Click here](#) to contact us for licensing details and experience the power of ISO15156-Compass.

ISO15156-Compass, the software solution to SSC prediction and materials selection for oil and gas production systems.

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