



Corrosion Modeling Software and Corrosion Prediction  
Software Series

## **OCTG-Compass®: Corrosion Prediction and CRA Materials Selection Guide for Oil and Gas Production Systems**

*High-Value Software Solutions to Costly Corrosion*

Version 9.22

★ **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 OCTG-Compass**

OCTG-Compass models and predicts corrosion under the prevailing operating conditions and provides guide for CRA materials selection for oil and gas production systems as per international standard ISO 15156. Users of OCTG-Compass simply enter the production data, and the software will compute the in-situ pH as per ISO 15156, the pitting resistance equivalent number (PREN) as per ISO 15156, the corrosion rate when the selected alloy is used below the temperature limit, the SSC environmental severity as per ISO 1516, the CRA's susceptibility to sulfide stress cracking (SSC) and stress corrosion cracking (SCC). Figures 1 and 2 below show OCTG-Compass in use.

OCTG-Compass® CRA Materials Selection Guide for Oil and Gas Production Systems

System Pressure	bar	120	CO2 %mole in Gas Phase	2.000
System Temperature	°C	190	H2S %mole in Gas Phase	0.020
Sodium Chloride, NaCl	g/L	50,000	Acetic Acid/Acetate, ppm	100
Alkalinity ([HCO3-])	ppm	20	in-situ pH	5.28
Select a CRA	13Cr	Recommended Alloy Under the Prevailing Condition		
PREN of Selected CRA	13Cr Super 13Cr	22Cr or 25Cr		
CRA Temperature Limit	316	The safe operating temperature of 13Cr is a function of NaCl content and partial pressure of CO2. Severe pitting of 13Cr may occur in the presence of chlorides and oxygen.		
Corrosion Rate of Selected CRA	316L			
Refer to comments on the right.	22Cr			
	25Cr			
	Alloy 28			
	Alloy 825			
	Alloy 2550			
	Alloy 625			
	Alloy C276			

OCTG-Compass® Version 9.22 © 1995 - 2022 WebCorr Corrosion Consulting Services

Figure 1 Selecting a CRA

OCTG-Compass® CRA Materials Selection Guide for Oil and Gas Production Systems

System Pressure	bar	120	CO2 %mole in Gas Phase	2.000
System Temperature	°C	190	H2S %mole in Gas Phase	0.020
Sodium Chloride, NaCl	g/L	50,000	Acetic Acid/Acetate, ppm	100
Alkalinity ([HCO3-])	ppm	20	in-situ pH	5.28
Select a CRA	13Cr	Recommended Alloy Under the Prevailing Condition		
PREN of Selected CRA	13	22Cr or 25Cr		
CRA Temperature Limit	150°C	The safe operating temperature of 13Cr is a function of NaCl content and partial pressure of CO2. Severe pitting of 13Cr may occur in the presence of chlorides and oxygen.		
Corrosion Rate of Selected CRA	≤ 0.05 mm/y			
Refer to comments on the right.				

OCTG-Compass® Version 9.22 © 1995 - 2022 WebCorr Corrosion Consulting Services

Figure 2 OCTG-Compass recommendations based on input

In Figure 2 above, the user selected 13Cr alloy that has a temperature limit of 150°C.

In this user scenario, OCTG-Compass recommends 22Cr or 25Cr duplex to meet the corrosion resistance under the prevailing operating conditions. The applications of OCTG-Compass are immensely useful in engineering design, corrosion prediction and CRA materials selection for oil and gas production systems.

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

---

*OCTG-Compass, giving you the right directions in CRA materials selection for oil and gas production systems.*

[Home](#) | [Contact Us](#) | [PDF](#)

*Copyright © 1995-2022. WebCorr Corrosion Consulting Services. All rights reserved.*