



## 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 11.3

★ **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

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## **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 temperature limit for the selected CRA, and the corrosion rate of the selected CRA. Figures 1 and 2 below show the inputs and outputs in OCTG-Compass.

# 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			
	22Cr			
	25Cr			
Refer to comments on the		Alloy 28		
		Alloy 825		
		Alloy 2550		
		Alloy 625		
		Alloy C276		

Figure 1 OCTG-Compass: CRA Materials Selection Guide for Oil and Gas Production Systems

OCTG-Compass® CRA Materials Selection Guide for Oil and Gas Production Systems				Version 11.3.11	
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, °C	150	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				
The system temperature exceeded the temperature limit for the selected CRA. Consider the recommended alloy on the right.					

Figure 2 OCTG-Compass recommendations based on user inputs

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.**

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

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