



**Strategy Help System**

## SYSTEM FEATURES

- For use on all commonly available PCs with Intel Pentium on equivalent processors
- Requires Microsoft Windows 95/98/2000/XP/NT or compatible operating systems
- Network compatible
- Available with comprehensive technical support

## WHY STRATEGY ?

BECAUSE Strategy ...

- Is the only corrosion/materials framework to address critical issues of risk and cracking performance
- Can assess complex cracking and growth considerations
- Contains comprehensive database integration
- Has been built from the ground up to be customized, meaning one can easily incorporate individual risk assessment criteria into the program
- Has data built into strategy tools that can be deployed and offer immediate benefits
- Is the only cost effective solution to risk and cracking assessment for sour systems

## PERFORMANCE CHARACTERISTICS

- Determine Hydrogen Flux Severity and charging efficiency for both upstream and downstream environments
- Evaluate steels on the basis of relevant material and design parameters
- Comprehensive database utility stores data about materials, environments and inspections
- Integrates material and environmental criteria to determine suitability of specific steels to specific environments
- Provides comprehensive online help that promotes ease of learning and training of professionals on critical aspects of material behavior risk and reliability assessment
- Provides access to significant laboratory data and published literature of cracking performance & risk/reliability assessment.

Program results that graphically indicate risk of cracking susceptibility

Analyze all materials in various customizable environments for HIC, SOHIC and SSC at a glance.

**Material(s) Analysis F**

Selected Environment  
Environment Name: FCCU  
Environment Severity: 6.67

Material is resistant to cracking. (Green bar)  
Material is susceptible to cracking. (Red bar)

**Consultation Results**

Environment Severity Factor (ESF) is a measure of the potential of the environment to cause cracking. Lower values of ESF are desirable.

Crack Growth Factor (CGF) is an index of crack growth potential. Lower values of CGF are desirable.

Material Ranking for HIC, SOHIC, SSC is a measure of a material's resistance. A higher value for material ranking indicates greater material resistance.

User Comments:  
Please type your comments here, if any.

**Severity Indices**  
Environment Severity Index: 5.4  
Crack Growth Factor: 2.76

**Resistance Indices**  
Material Ranking for HIC: 1  
Material Ranking for SOHIC: 4.56  
Material Ranking for SSC: 10

Material Resistance is: ■ Insufficient ■ Adequate

**Strategy - B™ for Refineries**

Determine the risk of H<sub>2</sub>S cracking failure in many types of refinery units, including amine units, FCCU, light ends and hydro-treaters.

Dynamically displays Environment Severity and Crack Growth Factor

Material Name	HIC	SOHIC	SSC
AS 3678 Gr 350 (ASTM A 516-65) 3	6.78	4.05	10
ASTM A516-70	1	3.16	3
ASTM A516-70-2	1	4.56	10
KTI-Fish-1	8	6.83	10
PB - ARAB IGT - API 5LX-52	1.1	3.9	1
X52CONV	2	2.7	3

**Crack Growth Factor**

Predict and assess reliability of performance and potential crack growth in sour systems

**Material Evaluation Module**

Evaluate commonly used pipeline steels for cracking performance in terms of 17 critical materials parameters.

**Strategy - A™ for Sour Pipelines**

Evaluate assess and select steels for resistance to HIC, SOHIC and SSC for sour pipeline service.

**Material Data**

Add New Name: ASTM A516-70-2  
Inclusions: Elongated Stringers  
Method of Manufacture: Fully Killed  
Applicable Microstructure: Centerline Segregation  
Material Condition: Plate  
Heat Treatment: Hot Rolled

**Element (%)**  
Carbon: 0.04  
Phosphorus: 0.015  
Sulfur: 0.02  
Calcium: 0.02  
Copper: 0.27  
Manganese: 1.5

**Properties**  
HAZ: 240 VHN  
Base Metal: 20 HRC  
Weld Metal: 20 HRC  
Stress/ SMYS: 40 %  
Yield Strength: 400 MPa  
Plate Thickness: 20 mm

Easily add new or edit current materials and environments with access to database using ODBC.