

Current Practices in Mitigating Internal Corrosion

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Shell's Internal Corrosion Program

IS NOT

- Documentation of corrosion monitoring and treating data alone

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- Documentation of corrosion monitoring and treating data alone
- A response to solely satisfy PHMSA requirements

Shell's Internal Corrosion Program

IS

- A successful Management System approach that establishes a philosophy of continual process improvement

Shell's Internal Corrosion Program

IS

- A successful Management System approach that establishes a philosophy of continual process improvement
- A systematic approach to managing corrosion risks through consideration of data across disciplines

Shell Corrosion Program Management System



Shell Corrosion Program Management System

TOP TIER PERFORMANCE



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Corrosion Program Components

• Standards and Procedures

Corrosion Library



➤ I&M Manual



Aligns field practice
w/ internal & reg.
requirements

➤ Technical Standards

➤ Technical Guides

➤ Industry Practices (NACE, API, etc.)





– Training



Corrosion Program Components

• Implementation, Monitoring, & Corrective Action

Implementation (Prevention)

- Maintenance pigging 
- Control of oxygen entry
- Separation/Dehydration
- Flow Analysis 
- BS&W Analysis 
- Modeling to quantify threats 
- Risk Assessment Meetings



Corrosion Program Components

- **Implementation, Monitoring, & Corrective Action**

Monitoring

- **Coupons & Probes**
- **Direct Assessment**
- **Sampling**
- **ILI DI**



JPEG Image



Microsoft Word Document



Corrosion Program Components

- **Implementation, Monitoring, & Corrective Action**

Corrective Action (Control)

- Inhibition
- Brush Pigging/Biocide

Corrective Action (Failure)

- Root Cause Studies
- LFI



Shell Corrosion Program Management System

TOP TIER PERFORMANCE

Management Leadership, Commitment, Planning



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TOP TIER PERFORMANCE

Management Leadership, Commitment, Planning

UPDATE
POLICIES

Management
Review

Policy and
Strategic
Objectives

GOAL
ZERO

ASSURANCE
PROGRAM

Audit

Organisation and
Responsibilities

AI
TEAM

Implementation
Monitoring
Corrective Action

Hazards
and Effects
Management

RAMs
DI

Standards, Procedures

QUESTIONS