



CORROSION UNDER INSULATION

CHALLENGES & MANAGEMENT

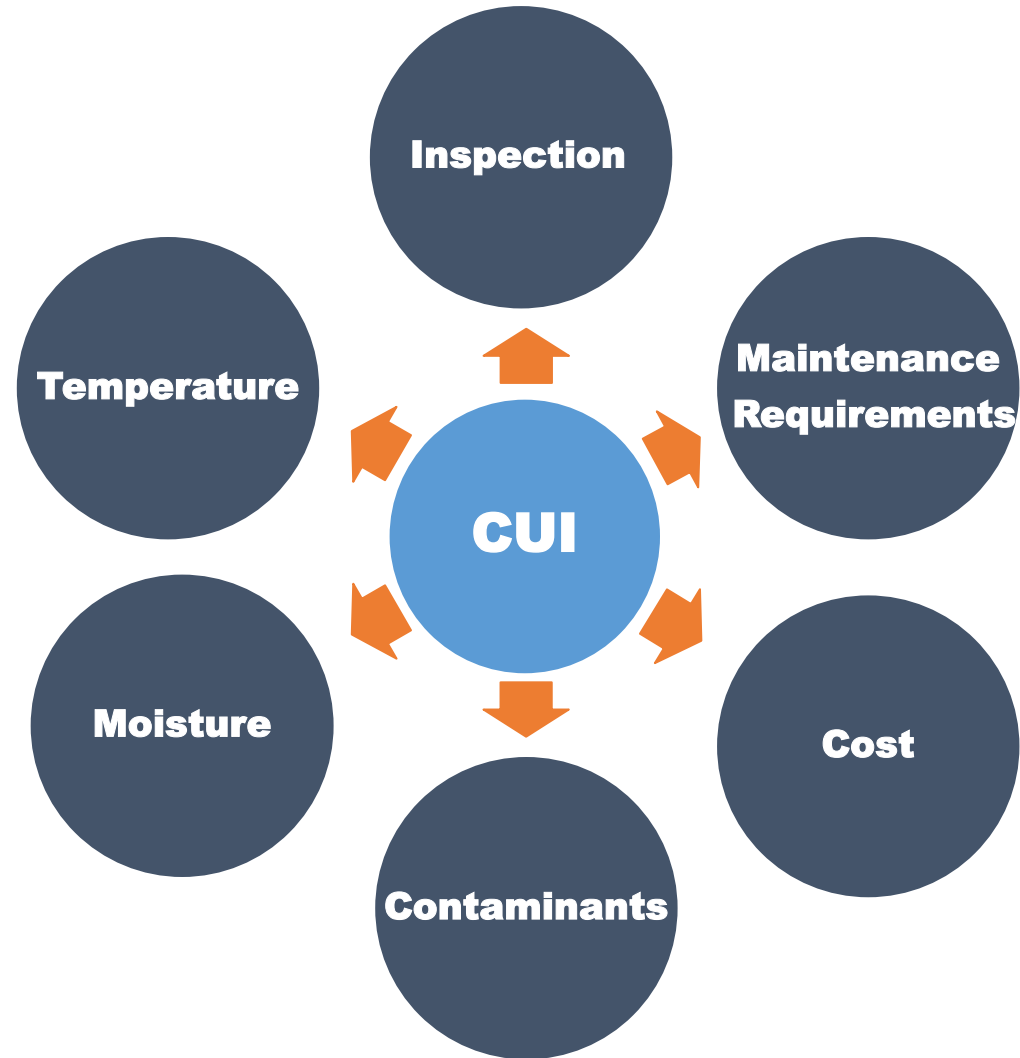
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CUI CHALLENGES

- **CUI is the external corrosion of pipework and vessels that occurs beneath insulation following water ingress.**
- **Current Industry Guidelines and Practice include**
 - **API RP 583; Corrosion Under Insulation and Fireproofing**
 - **NACE SP0198- 2017; Control of Corrosion Under Thermal Insulation and Fireproofing Material**
 - **EI Guidelines for the design, installation and management of thermal insulation systems**
 - **EFC WP13 WP15; Corrosion Under Insulation (CUI) guidelines**



CUI CHALLENGES



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- **Cost**

- **High expense in terms of failures, remedial, deferment and inspection activities**
- **Justification of the cost benefit in adopting new Non-Intrusive inspection technology**

- **Complex System**

- **A lot of contributing factors including water ingress, Temperature & Design**
- **Most environmental factors are impossible to control**
- **Can be very localised and can occur anywhere**



CUI CHALLENGES

- **Detection**

- **External appearance of the cladding may not correspond to the condition of the underlying pipework**
- **NII – There are certain limitations such as detection capability of the tool, cost , speed, inconsistent results, individual interpretation e.t.c.**



CUI MANAGEMENT

A Structured approach is required to predict and mitigate the effects of CUI

