

ISO 21601:2013-04 (E)

Corrosion of metals and alloys - Guidelines for assessing the significance of stress corrosion cracks detected in service

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Principle	1
4	Characterization of the nature and origin of the crack	2
5	Definition of service conditions and system history	2
5.1	Stresses	2
5.2	Service environment	3
6	Material characteristics	4
6.1	Cold work	4
6.2	Welding	4
6.3	Ageing	5
6.4	Microstructural orientation	5
7	Prediction of KISCC and crack growth rates	5
7.1	KISCC	6
7.2	Prediction of growth rates below KISCC	9
7.3	Crack growth above KISCC	10
7.4	Non-propagating cracks	15
7.5	Probabilistic issues	15
8	Structural integrity assessment	15
9	Modification of service conditions to mitigate crack growth	17
9.1	Temperature change	17
9.2	Reduction of operational stresses	18
9.3	Alteration/more rigorous control of the environment	18
Bibliography		19