

ISO 13174:2012-12 (E)

Cathodic protection of harbour installations

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
1.1	General	1
1.2	Structures	1
1.3	Materials	1
1.4	Environment	1
1.5	Safety and environment protection	2
2	Normative references	2
3	Terms and definitions	2
4	Competence of personnel	4
5	Design basis	5
5.1	Objectives	5
5.2	Cathodic protection criteria	5
5.3	Design parameters	6
5.4	Electrical current demand	7
5.5	Cathodic protection systems	9
5.6	Electrical continuity	11
5.7	Interactions	11
6	Impressed current systems	12
6.1	Objectives	12
6.2	Design considerations	12
6.3	Equipment considerations	13
7	Galvanic anode systems	16
7.1	Objectives	16
7.2	Design	16
7.3	Materials	16
7.4	Location of anodes	17
7.5	Installation	17
8	Commissioning, operation and maintenance	18
8.1	Objectives	18
8.2	Commissioning: galvanic systems	18
8.3	Commissioning: Impressed current systems	18
8.4	Operation and maintenance	19
9	Documentation	20
9.1	Objectives	20
9.2	Impressed current system	20
9.3	Galvanic anodes system	21
Annex A (informative) Guidance for current requirements for cathodic protection of harbour installations		22

Annex B (informative) Anode resistance, current and life determination	24
Annex C (informative) Typical electrochemical characteristics of impressed current anodes	29
Annex D (informative) Guidance related to the design process	30
Bibliography	32