ISO 22974:2023-07 (E)

Petroleum and natural gas industry - Pipeline transportation systems - Pipeline integrity assessment specification

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms,definitionsandabbreviatedterms 1
3.1 Terms and definitions 1
3.2 Abbreviated terms 4

4 General 5
4.1 Key principles 5
4.2 Pipeline integrity assessment process 5

5 Data collection and analytics 7
5.1 Data collection 7
5.2 Data quality 7
5.3 Data alignment 8
5.4 Data analysis 8
5.5 Hazard identification 8
5.6 Data sufficiency 9

6 Condition inspection and monitoring 9
6.1 Data collection method 9
6.2 In-Line inspection 9
6.3 Direct inspection 11
6.4 Pressure test 13
6.5 Material property testing 15
6.6 Other new methods 16

7 Fitness for purpose 16
7.1 General 16
7.2 Establishing acceptable FFP assessment 17
7.2.1 Failure and damage mechanism 17
7.2.2 Assessment method selection 18
7.2.3 Acceptance criteria of FFP assessment 18
7.3 FFP assessment based on in-line inspection 18
7.3.1 Defect data statistics and causation analysis 18
7.3.2 Assessment method selection 18
7.3.3 Assessment conclusions 19
7.4 Applicability analysis of pressure test 19
7.5 FFP assessment of direct inspection 20
7.6 Other methods of FFP assessment 20
7.7 Comprehensive assessment 20
7.8 Current acceptability 21
7.9 Future acceptability 21
7.10 Limitations 22
7.11 FFP assessment conclusions and recommendations 22

8 Integrity assessment report 22
8.1 Re-assessment interval 22

8.2 Assessment report 23
8.3 Updating the integrity management program 23

Bibliography 24