

Inflow Control Devices

API SPECIFICATION 19ICD
FIRST EDITION, MAY 2020



AMERICAN PETROLEUM INSTITUTE

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This specification was initiated using Recommended Practice - Inflow Control Devices (ICDs) provided by the Advanced Well Equipment Standards group.

Contents

	Page
1 Scope	1
2 Normative References	1
3 Terms, Definitions, and Abbreviations	2
3.1 Terms and Definitions	2
3.2 Abbreviations	3
4 Functional Specification	7
4.1 General	7
4.2 ICD Type Description	7
4.3 Well Parameters	8
4.4 Operational Parameters	8
4.5 Environmental Compatibility	9
4.6 Compatibility with Related Well Equipment	9
4.7 Design Validation Grades	10
4.8 Quality Levels	10
5 Technical Specification	10
5.1 General	10
5.2 Technical Characteristics	10
5.3 Design Requirements	11
5.4 Design Verification	12
5.5 Design Validation Requirements	13
6 Supplier/Manufacturing Requirements	15
6.1 General	15
6.2 Documentation and Data Control	15
6.3 Product Identification	17
6.4 Quality Requirements	18
Annex A (informative) Reserved for Future Use	25
Annex B (informative) ICD Joint Components and Screen Attributes	26
Annex C (normative) Test Acceptance Test Fixture and Instrumentation Requirements	27
Annex D (normative) Cavitation Testing	30
Annex E (normative) Validation Test Requirements—ICD Flow Performance Test	33
Annex F (normative) Validation Test Requirements—Device Erosion Test	36
Annex G (normative) Validation Test Requirements—Mud Flow Initiation Test and Sediment Plugging Test	42
Annex H (normative) Validation Test Requirements—Flow Integrity Test	46
Annex I (normative) Validation Test Requirements—Static Pressure Test	48
Bibliography	50

Contents

	Page
Figures	
B.1 Examples of ICD Joint Showing ICD Components	26
B.2 ICD Joint Dimensions	26
C.1 Representative Test Article	28
C.2 Test Fixture Orientation (Cross-Section)	29
F.1 Producer and Injector Erosion Test Arrangement.....	38
F.2 API 19C Roundness Chart	39
F.3 Example of an Irregular and Angular Particle.....	40
Tables	
1 ICD Type Classification	8
2 Design Validation Grade for Both Production and Injection.....	13
3 Summary of Type 1, 2N, and 2M ICD's Quality Requirements	18
C.1 Summary of ICD Element Position and Test Fixture Orientation for Anneal Tests	28
G.1 Targets for Fluid Rheology Measurements.....	43
G.2 Composition of Test Fluids at Ambient Temperature (70 °F).....	43

Inflow Control Devices

1 Scope

This specification provides requirements and guidelines for inflow control devices (ICDs) for both production and injection, as defined herein, for use in the petroleum and natural gas industry. This specification provides requirements for the functional specification and technical specification, including design, design verification and validation, materials, documentation and data control, and quality requirements.

Products covered by any other API specification, such as sand screens and sliding sleeves are not included. Also not included are externally controlled downhole devices including interval control valves (ICVs). This specification does not cover the connections to the well conduit, the effects of corrosion, or ICDs designated for use in thermal recovery applications. Installation, application, and operation of these products are outside the scope of this specification.

This specification includes the following annexes:

- Annex A—Reserved for Future Use
- Annex B—ICD Joint Components and Screen Attributes
- Annex C—Test Article, Test Fixture and Instrumentation Requirements
- Annex D—Cavitation Testing
- Annex E—Validation Test Requirements—ICD Flow Performance Test
- Annex F—Validation Test Requirements—Device Erosion Test
- Annex G—Validation Test Requirements—Mud Flow Initiation Test and Sediment Plugging Test
- Annex H—Validation Test Requirements—Flow Integrity Test
- Annex I—Validation Test Requirements—Static Pressure Test

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies.

ANSI/ASQC Z1.4, *Sampling Procedures and Tables for Inspection by Attributes*

ANSI/NCSL Z540-3, *Requirements for the Calibration of Measuring and Test Equipment*

API 19S, *Sand Screens*

API 5CT, *Specification for Casing and Tubing*

API 13B-1, *Recommended Practice for Field Testing Water-based Drilling Fluids*

API 13B-2, *Recommended Practice for Field Testing Oil-based Drilling Fluids*

API 19C, *Measurement of and Specification for Proppants Used in Hydraulic Fracturing and Gravel-packing Operations*, Second Edition