

# Specification for Subsurface Sucker Rod Pump Assemblies, Components, and Fittings

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# Contents

	Page
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative References</b> .....	<b>1</b>
<b>3 Terms, Definitions, Symbols, and Abbreviations</b> .....	<b>2</b>
<b>3.1 Terms and Definitions</b> .....	<b>2</b>
<b>3.2 Symbols</b> .....	<b>3</b>
<b>3.3 Abbreviations</b> .....	<b>5</b>
<b>4 Functional Requirements</b> .....	<b>6</b>
<b>5 Technical Requirements</b> .....	<b>6</b>
<b>5.1 General Requirements</b> .....	<b>6</b>
<b>5.2 Design Requirements</b> .....	<b>6</b>
<b>5.3 Materials</b> .....	<b>7</b>
<b>6 Manufacturer Requirements</b> .....	<b>7</b>
<b>6.1 General</b> .....	<b>7</b>
<b>6.2 Quality Control</b> .....	<b>7</b>
<b>6.3 Product Identification</b> .....	<b>10</b>
<b>6.4 Documentation</b> .....	<b>10</b>
<b>Annex A (informative) Use of API Monogram by Licensees</b> .....	<b>12</b>
<b>Annex B (normative) Pump Assemblies</b> .....	<b>15</b>
<b>Annex C (normative) Pump Components</b> .....	<b>26</b>
<b>Annex D (normative) Measurement, Testing, and Gauging</b> .....	<b>88</b>
<b>Annex E (normative) Marking</b> .....	<b>90</b>
<b>Annex F (normative) Materials</b> .....	<b>92</b>
<b>Annex G (normative) Threaded Connections</b> .....	<b>98</b>
<b>Annex H (informative) Sucker Rod Pumping System Illustration</b> .....	<b>108</b>
<b>Bibliography</b> .....	<b>109</b>
<b>Figure</b>	
<b>B.1 Pump Designations</b> .....	<b>15</b>
<b>Tables</b>	
<b>1 Sampling Procedures</b> .....	<b>9</b>
<b>B.1 Pump Designations</b> .....	<b>15</b>
<b>B.2 RHA-Rod, Stationary Heavy Wall Barrel, Top Anchor Pump</b> .....	<b>18</b>
<b>B.3 RHB-Rod, Stationary Heavy Wall Barrel, Bottom Anchor Pump</b> .....	<b>19</b>
<b>B.4 RWA-Rod, Stationary Thin Wall Barrel, Top Anchor Pump</b> .....	<b>20</b>
<b>B.5 RWB-Rod, Stationary Thin Wall Barrel, Bottom Anchor Pump</b> .....	<b>21</b>
<b>B.6 RWT-Rod, Traveling Thin Wall Barrel, Bottom Anchor Pump</b> .....	<b>22</b>
<b>B.7 RXB-Rod, Stationary Heavy Wall Barrel, Bottom Anchor Pump</b> .....	<b>23</b>
<b>B.8 TH-Tubing, Heavy Wall Barrel Pump</b> .....	<b>24</b>
<b>B.9 RST-Rod, Traveling Thin Wall Barrel, Bottom Anchor, Soft-Packed Plunger Pump</b> .....	<b>25</b>
<b>C.1 Default Tolerances</b> .....	<b>26</b>
<b>C.2 Master Part Numbering System</b> .....	<b>27</b>

## Contents

	Page
C.3 B11-Barrel, Thin Wall.....	32
C.4 B12 or B12A-Barrel, Heavy Wall (Rod Pump).....	33
C.5 B13-Barrel, Heavy Wall (Tubing Pump).....	34
C.6 B14-Barrel, Thin Wall (Soft-Packed Rod Pump) .....	35
C.7 B15-Barrel, Heavy Wall (Soft-Packed Tubing Pump) .....	36
C.8 B16 or B16M-Barrel, Heavy Wall (Rod Pump) .....	37
C.9 B21 and B21Mc-Bushing, Valve Rod.....	38
C.10 B22-Bushing, Seat, Barrel Cage.....	39
C.11 B23-Bushing, Cage to Puller .....	39
C.12 C11-Cage, Top Open .....	40
C.13 C12 and C12M b-Cage, Top Plunger .....	41
C.14 C13-Cage, Closed, Pin Plunger.....	42
C.15 C14-Cage, Closed Barrel .....	43
C.16 C15-Cage, Closed, Box Plunger.....	44
C.17 C16-Cage, Standing Valve.....	45
C.18 C17-Cage, Top Plunger .....	46
C.19 C21-Connector, Upper Barrel.....	47
C.20 C22-Connector, Box Plunger .....	47
C.21 C31-Coupling, Extension.....	48
C.22 C32-Coupling, Pull Tube, Upper.....	49
C.23 C33-Coupling, Pull Tube, Lower.....	50
C.24 C34-Coupling, Tubing .....	51
C.25 C35-Coupling, Barrel .....	51
C.26 C36-Coupling, Barrel, Lower (Soft-Packed Tubing Pump) .....	52
C.27 C37-Coupling, Barrel, Upper (Soft-Packed Tubing Pump) .....	52
C.28 G11-Guide, Valve Rod.....	53
C.29 N11-Nipple, Seating, Cup Type (Rod Pump) .....	54
C.30 N12-Nipple, Seating, Mechanical Bottom .....	55
C.31 N13-Nipple, Seating, 2 Cup Type (Tubing Pump).....	56
C.32 N14-Nipple, Seating, Mechanical Top Lock .....	57
C.33 N21-Nipple, Extension, Upper .....	58
C.34 N22-Nipple, Extension, Lower .....	59
C.35 P11-Plug, Pull .....	60
C.36 P12-Plug Seat.....	61
C.37 P21-Plunger, One Piece .....	62
C.38 P22-Plunger, Assembled.....	63
C.39 P23-Plunger, Box End (Tubing Pump) .....	64
C.40 P24-Plunger, Soft-Packed.....	65
C.41 P31-Puller, Standing Valve .....	66
C.42 R11-Rod, Valve.....	67
C.43 Valve Rod Length PL.....	68
C.44 S11-Seating Mandrel, Cup (Type HR) (Rod Pump and Fittings) .....	69
C.45 S12-Seating Cup (Type HR) (Rod Pump).....	70
C.46 S13-Seating Cup Ring (Type HR) .....	71
C.47 S14-Seating Cup Nut (Type HR) .....	72
C.48 S15-Seating Cup Bushing, Top Anchor.....	73
C.49 S16-Seating Coupling, Bottom Anchor .....	74
C.50 S17-Seating Mandrel, Cup (Type HR) (Tubing Pump).....	75
C.51 S18-Seating Cup (Type HR) (Tubing Pump).....	76

## Contents

	Page
C.52 S19-Seating, Cup (Type HR) (Soft-Packed Tubing Pump) .....	77
C.53 S21-Seating Assembly, Mechanical Top Lock.....	78
C.54 S22-Seating Assembly, Mechanical Bottom Lock.....	79
C.55 S31-Seating Mandrel, Cup (Type O) .....	80
C.56 S32-Seating Cup (Type O) .....	80
C.57 S33-Seating Cup Ring (Type O).....	81
C.58 S34-Seating Cup Nut (Type O).....	81
C.59 T11-Tube, Pull.....	82
C.60 Pull Tube Length, PL .....	83
C.61 V11-Valve, Ball and Seat .....	85
C.62 V12-Ball .....	86
C.63 V13-Seat .....	87
F1 Pump Barrel Materials, Plated Barrels.....	92
F2 Pump Barrel Materials, Case Hardened .....	93
F3 Pump Barrel, Pull Tube and Coupling Extension Materials, Nonhardened .....	94
F4 Pump Materials for Balls and Seats .....	94
F5 Pump Materials for Cages, Hard Lined.....	95
F6 Pump Materials for Pump Cages, Valve Rods, and Fittings .....	95
F7 Pump Materials for Seating Cups .....	96
F8 Pump Plunger Materials, Spray Metal Coated .....	96
F9 Pump Plunger Materials, Plated.....	97
G.1 B Thread Connection Details for Product and Gauges .....	99
G.2 C Thread Connection .....	100
G.3 F Thread Connection .....	101
G.4 H Thread Connection .....	102
G.5 L Thread Connection (Modified API Line Pipe).....	102
G.6 Thread Height Dimensions (Modified API Line Pipe) .....	103
G.7 P Thread Connection .....	103
G.8 S Details of All Straight Threads Used in API Subsurface Pumps and Fittings.....	104
G.9 X Wrench Flat Dimensions.....	107

## **Introduction**

This specification has been developed by users, purchasers, suppliers and manufacturers of subsurface sucker rod pumps intended for use in the petroleum and natural gas industry worldwide. This specification is intended to give requirements and information to all parties in the design, manufacture and selection of subsurface sucker rod pumps and their components. Furthermore, this specification addresses the minimum requirements with which the manufacturer is to claim conformity with this specification.

Included within this specification are normative annexes specifying requirements and informative annexes providing general information.

Attention is brought to users of this specification that requirements above those outlined in this specification can be required for individual applications. This specification is not intended to inhibit a manufacturer from offering, or the user or purchaser from accepting alternative equipment or other engineering solutions. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the manufacturer to identify any variations from this specification.

In this specification, quantities expressed in United States Customary (USC) units are also, where practical, expressed in International System (SI) units, either in parentheses in the text or on separate data sheets. USC units shall be the controlling units, SI units are included as a convenience for the user of this specification.



# Specification for Subsurface Sucker Rod Pump Assemblies, Components, and Fittings

## 1 Scope

This specification provides the requirements and guidelines for the design of subsurface sucker rod pumps and their components as defined herein for use in the sucker rod lift method for the petroleum and natural gas industry.

This specification covers subsurface sucker rod pump assemblies (including insert and tubing), components, and fittings, in commonly used bore sizes for the sucker rod lift method. Sufficient dimensional and material requirements are provided to assure interchangeability and standardization of all component parts.

This specification does not cover specialty subsurface sucker rod pump accessories or special design components. Installation, operation, and maintenance of these products are not included in this specification; however, recommendations can be found in API 11AR.

## 2 Normative References

The following referenced documents are indispensable for the application of this document for manufacture of products. The following referenced documents shall be informative for products that are not manufactured. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Specification 5B, *Specification for Threading, Gauging and Thread Inspection of Casing, Tubing, and Line Pipe Threads*

API Recommended Practice 11AR, *Recommended Practice for Care Use of Subsurface Pumps*

API Specification 11B, *Specification for Sucker Rods, Polished Rods and Liners, Couplings, Sinker Bars, Polished Rod Clamps, Stuffing Boxes, and Pumping Tees*

API Specification Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry*

ANSI/ASQ Z1<sup>1</sup>, *Sampling Procedures and Tables for Inspection by Attributes*

ANSI/ASQ Z1.4, *Single Sampling Plan for Normal Inspection*

ASNT-TC-1A<sup>2</sup>, *Personnel Qualifications and Certification in Nondestructive Testing*

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<sup>1</sup> American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, New York 10036, [www.ansi.org](http://www.ansi.org).

<sup>2</sup> American Society for Nondestructive Testing, 1711 Arlingate Lane, P.O. Box 28518, Columbus, Ohio 43228, [www.asnt.org](http://www.asnt.org).