Date of Issue: May 2024

Affected Publication: API Specification 5CT, Casing and Tubing, 11th Edition, December 2023

## Errata 1

API Monogram Program Effective Date: The date shall be changed as indicated by the red markup below:

API MONOGRAM PROGRAM EFFECTIVE DATE: JANUARY 1, 2025

Table 2: The table shall be changed as indicated by the red markup below:

Requirement	Reference
Heat treatment	5.2, Table C.3 or Table E.3
Hot rotary straightening minimum temperature—Grades L80, C90, T95, R95, P110, and Q125	5.3.2, 5.3.3, 5.3.5, A.14 (SR 42)
Traceability for Grades other than C110 and Q125	5.4.1
Yield strength for Grade Q125	6.2.3, A.15 (SR 43)
Impact test minimum percent shear area for Grades N80, L80 Type 1, L80 3Cr, C90, R95, T95, P110, and Q125	6.3.3, A.16 (SR 44)
Minimum percentage martensite required for quenched and tempered products for Grades L80 Type 1, C90, and T95	6.10.2, A.17 (SR 45)
Lower alternative impact test temperature	9.7.5
Impact testing for Grades N80, L80, R95, C90, T95, and P110	6.5.2, A.9 (SR 16)
Impact testing for Grades H40, J55, and K55	6.5.1, A.9 (SR 16)
SSC test requirements for Grades C90 and T95	6.14.2, 9.10.2, A.18 (SR 46)
SSC test method(s) and test solution(s) for Grade C110	6.14, 9.10, A.11 (SR 39)
Casing jointers SC and LC	7.7
Alternative drifting requirements	7.10
Casing with couplings detached	7.14
Coupling make-up (other than power-tight)	7.14
Coupling grade	<del>8.2</del>
Seal-ring couplings	8.8, A.8 (SR 13)
Heat and supplementary analyses	9.3
Frequency of hardness testing for non-upset, Grades C90 and T95	9.6.4, A.19 (SR 47)
Wall thickness measurement for 100 % coverage	9.13.4, A.21 (SR 49)
NDE of pipe ends (all Grades)	9.15.13, A.20 (SR 48)
Additional markings	1.5, 10
Pipe coatings	11.1
Alternative grades or heat treatments of coupling	8.2
Combination couplings	8.7
Class A or customer-supplied thread protectors	11.2.1

Table 3: The table shall be changed as indicated by the red markup below:

Requirement	Reference
Upset—Grade C110	5.1
Statistical tensile testing	6.2.4, A.10 (SR 38)
Statistical impact testing	9.7.6, A.7 (SR 12)
Impact of non-heat-treated product	6.5.1, A.9 (SR 16)
SSC test acceptance criteria	6.14.4
SSC test Method D requirement for Grade C110 product over 50.8 mm (2.0 in.) wall thickness	6.14.4, Table 13
Length other than specified in Table C.22 or Table E.22	7.6
End shaping of Grade C90 and higher strength	7.12.4
Surface treatment of C110 threads	7.12.5
Thread and storage compound	7.14
Waiving NDE of Grades H40, J55, K55 couplings	8.11.3
Coupling thread surface treatment Grade Q125 only	8.14
Reduced section tensile specimens Grade C110 and Q125	9.4.6
Type and size of test specimen for tensile testing the upset	9.4.5
Additional hardness testing	9.6.1
Number of specimens for NACE Method A Grades C90, T95, and C110	9.10.2
Test specimen selection and location	9.10.4
Invalidation of test for Method D mechanical compliance	9.10.6
Alternative hydrostatic test pressures	9.12.3
Plain-end Grade Q125 casing hydrostatic testing	9.12.2
NDE	9.15, A.2 (SR 1), A.3 (SR 2), A.5 (SR 10), A.6 (SR 11)
Marking requirements	10
Marking only with bands on Grade L80 3Cr couplings and pup joints with surface treatment	10.4.2–10.4.5
Driftable thread protectors	11.2.4
Include coupling certification with pipe certification	12.3 r)
Special wall thickness with S, L, and B end-finish	Table C.1 or Table E.1, footnote <sup>e</sup> ; see API 5B for acceptable wall thickness ranges
Coupling blanks Grade Q125 only	8.4.2, A.4 (SR 9)
Upset casing Grade Q125 only	A.5 (SR 10)
Electric-weld casing and pup joints Grades H40, J55, K55, N80, L80 Type 1, R95	A.12 (SR 40)
Electric-weld casing and pup joints Grades P110 and Q125	5.1, A.6 (SR 11)
Alternative F factor for statistical impact testing	A.7.2 (SR 12.2)
Special size and wall thickness plain-end pipe	7.2
Supplemental inspection when hydrostatic test pressure is limited to 69.0 MPa (10,000 psi)	A.13.1 (SR 41.1), A.13.2 (SR 41.2)

Table 5: The table shall be changed as indicated by the red markup below:

Requirement	Reference
Heat treatment	5.2, Table C.3 or Table E.3
Hot rotary straightening minimum temperature—Grades L80, C90, T95, R95, and P110	5.3.2, 5.3.3, A.14 (SR 42)
Traceability for Grades other than C110 and Q125	5.4.1
Impact test minimum percent shear area for Grades N80, L80 Type 1, L80 3Cr, C90, R95, T95, and P110	6.3.3, A.16 (SR 44)
Minimum percentage martensite required for quenched and tempered products for Grades L80 Type 1, C90, and T95	6.10.2, A.17 (SR 45)
Lower alternative impact test temperature	9.7.5
Impact testing for Grades N80, L80, R95, C90, T95, and P110	6.5.2, A.9 (SR 16)
Impact testing for Grades H40 and J55	6.5.1, A.9 (SR 16)
SSC test requirements for Grades C90 and T95	6.14.2, 9.10.2, A.18 (SR 46)
Alternative drift requirements	7.10
Extended-length upset	7.11.6
Rounded nose for EU	7.12.3
Coupling make-up (other than power-tight)	7.14
Tubing with couplings detached	7.14
Coupling grade	<del>8.2</del>
Alternative grades or heat treatments of coupling	8.2
Combination couplings	8.7
Seal-ring couplings	8.8, A.8 (SR 13)
Heat and supplementary analyses	9.3
Additional hardness testing	<del>9.6.2</del>
Frequency of hardness testing for non-upset, Grades C90 and T95	9.6.4, A.19 (SR 47)
Wall thickness measurement for 100 % coverage	9.13.4, A.21 (SR 49)
NDE of pipe ends (all Grades)	9.15.13, A.20 (SR 48)
Additional markings	1.5, 10
Pipe coatings	11.1
Class A or customer-supplied thread protectors	11.2.1

Table 6: The table shall be changed as indicated by the red markup below:

Requirement	Reference
Statistical tensile test	6.2.4, A.10 (SR 38)
Statistical impact testing	9.7.6, A.7 (SR 12)
Impact testing of non-heat-treated product	6.5.1, A.9 (SR 16)
SSC test acceptance criteria	6.14.4
Length other than specified in Table C.22 or Table E.22	7.6
End shaping of Grade C90 and higher strength	7.12.4
Thread and storage compound	7.14
Waiving NDE of Grades H40, J55, K55 couplings	8.11.3
Type and size of test specimen for tensile testing the upset	9.4.5
Additional hardness testing	9.6.1
Number of specimens for NACE Method A Grades C90 and T95	9.10.2
Test specimen selection and location	9.10.4
Invalidation of test for Method D mechanical compliance	9.10.6
Alternative hydrostatic test pressures	9.12.3
NDE	9.15, A.2 (SR 1), A.3 (SR 2), A.5 (SR 10), and A.6 (SR 11)
Marking requirements	10
Marking only with bands on Grade L80 3Cr couplings and pup joints with surface treatment	10.4.2 to 10.4.5
Driftable thread protectors	11.2.4
Include coupling certification with pipe certification	12.3 r)
Electric-weld tubing and pup joints—Grades H40, J55, K55, N80, L80 Type 1, R95	A.12 (SR 40)
Supplemental inspection when hydrostatic test pressure is limited to 69.0 MPa (10,000 psi)	A.13.1 (SR 41.1), A.13.2 (SR 41.2)
Electric-weld tubing and pup joints—Grade P110	A.6 (SR 11)
Special size and wall thickness	7.2
Casing used for tubing	7.2, Table C.22 or Table E.22

Table 7: The title shall be changed as indicated by the red markup below:

# Table 7—Purchaser-supplied Information (Coupling Stock and Coupling Material and Accessory Material)

Table 8: The title shall be changed as indicated by the red markup below:

# Table 8—Optional Requirements Specified by the Purchaser (Coupling Stock and Coupling Material and Accessory Material)

Table 8: The table shall be changed as indicated by the red markup below:

Requirement	Reference
Heat treatment	5.2, Table C.3 or Table E.3
Statistical tensile testing	6.2.4, A.10 (SR 38)
Statistical impact testing	9.7.6, A.7 (SR 12)
Impact testing	6.4, 9.7, A.9 (SR 16)
SSC test acceptance criteria	6.14.4
Heat and supplementary analyses	9.3
Number of specimens for NACE Method A Grades C90, T95, and C110	9.10.2
Test specimen selection and location	9.10.4
Invalidation of test for Method D mechanical compliance	9.10.6
Wall thickness measurement for 100 % coverage	9.13.4, A.21 (SR 49)
Additional markings	1.5, 10

Section 9.15.1: The sixth paragraph is a duplicate and shall be deleted as indicated by the red markup below:

#### 9.15.1 General

Subsection 9.15 specifies the NDE requirements and inspection levels for seamless and electric-welded pipe and for coupling stock. For NDE of couplings, see 8.11. A summary of the required NDE operations for seamless pipe, coupling stock, and the body of welded pipe is given in Table C.37 or Table E.37. All pipe and coupling stock that require NDE (except visual inspection) shall be inspected full-body, full-length for defects.

The NDE standards referenced in this section are based on traditional proven NDE methods and techniques practiced and adopted worldwide for the inspection of tubular products. However, other NDE methods/techniques, which have demonstrated capability in detecting defects as defined in 7.13, can be used. Records shall be maintained in accordance with 9.15.4.

At the discretion of the manufacturer, the notches referenced in Table C.38 or Table E.38 may be oriented at an oblique angle such that detection of defects typical of the manufacturing process is optimized. The technical justification for modification of the orientation shall be documented.

For Grades C90, T95, and C110, the oblique angle inspected shall be stated on the certificate. In the case of material shipped directly to a processor from the seamless pipe mill, the pipe mill shall provide the processor documentation regarding the oblique angle to be inspected. The technical justification for the orientation shall be documented.

If the provisions for purchaser inspection of pipe or witnessing of NDE operations, or both, are stated in the purchase agreement, they shall be in accordance with Annex B.

If the provisions for purchaser inspection of pipe or witnessing of NDE operations, or both, are stated in the purchase agreement, they shall be in accordance with Annex B.

The inspections performed in accordance with 9.15, with the equipment calibrated to the reference indicators in Table C.39 or Table E.39, should not be construed as ensuring that the material requirements in 7.13 have been met.

NDE equipment calibration shall be performed in accordance with ASTM E543.

For full-body, full-length NDE, the inspection equipment shall provide 100 % coverage for imperfections other than wall thickness. For untested pipe ends, see 9.15.13.

When performing wet magnetic particle inspection, wet particle concentration shall be checked every 8 h or every shift change, whichever is more frequent. When performing fluorescent magnetic particle inspection, the minimum black light intensity at the examination surface shall not be less than 1000  $\mu W \cdot cm^{-2}$  (10  $W \cdot m^{-2}$ ).

Section 13.1: The first paragraph shall be changed as indicated by the red markup below:

A pipe mill shall operate one or more pipe-making facilities capable of producing products as described in Section 5 of this standard. A pipe mill shall also have suitable equipment and be responsible for weighing pipe and marking pipe, coupling stock, coupling material, or accessory material.

Section A.8.3: The section shall be changed as indicated by the red markup below:

All couplings that meet the requirements of A.8 (SR 13) shall be marked "S13" and have a blue band painted around the coupling (see Figure D.27). If the coupling size does not permit separation of markings as shown in Figure D.28, stencil marking may cross over the paint bands. When this occurs, the stencil shall be on top of the band and be of a contrasting color.

Section A.11.6: The first paragraph shall be changed as indicated by the red markup below:

Either non-pre-cracked or fatigue pre-cracked specimens may be used. If fatigue pre-cracking of specimens is employed, the maximum stress intensity factor during pre-cracking shall not exceed 20.4 MPa·m<sup>1/2</sup> (18.6 ksi·in.<sup>1/2</sup>).

Table C.12: The table shall be changed as indicated by the red markup below:

Critical Thickness mm	<b>L80</b> <sup>a, b, c, d, e</sup>	<b>N80</b> <sup>a, b, c, d</sup>	<b>C90</b> a, b, c, d	<b>R95/T95</b> <sup>a, b, c, d</sup>	P110 <sup>a, b, c, d</sup>	C110 <sup>a, b, c, d</sup>	<b>Q125</b> <sup>a, b, c, d</sup>
1	2	3	4	5	6	7	8
≤ 12.7	27	20	27	27	27	27	34
15.2	27	23	27	27	30	27	34
17.8	27	26	27	27	32	28	35
20.3	27	27	27	27	35	30	38
22.9	27	30	29	30	38	33	41
25.4	28	33	31	32	41	35	44
27.9	30	34	33	35	44	38	47
30.5	32	37	35	37	47	40	50
33.0	34	39	37	39	50	43	53
35.6	36	41	39	41	53	45	56
38.1	38	43	42	44	56	48	60
40.6	40	46	44	46	58	50	63
43.2	42	47	46	48	61	53	66
45.7	44	50	48	50	64	55	69
48.3	46	53	50	53	67	58	72
50.8	48	54	53	55	70	60	75
53.3	49	57	55	57	73	62	78
55.9	51	60	57	60	76	65	81
58.4	53	61	59	62	79	67	84
61.0	55	64	61	64	82	70	87
63.5	57	66	63	66	84	72	90

<sup>&</sup>lt;sup>a</sup> Values given are full-size, average minimums; refer to 6.3.1 for individual minimum values.

Table C.13: The table shall be changed as indicated by the red markup below:

L80	N80	C90	R95/T95	P110	C110	Q125
1	2	3	4	5	6	7
54	40	54	54	54	54	68

NOTE 1 Values given are full-size, average minimums; refer to 6.3.1 for individual minimum values.

NOTE 2 Longitudinal testing is required only if transverse testing is not possible. Coupling, coupling stock tested in the transverse direction does not need to be tested or demonstrate compliance to these values.

b If transverse specimens of  $\frac{1}{2}$ -size cannot be taken, refer to 9.7.1.

<sup>&</sup>lt;sup>c</sup> For wall thicknesses not listed, the manufacturer has the option to utilize the applicable formula in accordance with 6.4.4 or the next higher wall in this table.

d For all Grades except L80 13 Cr, wall thickness greater than 63.5 mm, refer to 4.2.1 or 4.3.1 or 4.4.3.

e For Grade L80 13 Cr, wall thickness greater than 35.6 mm, refer to 4.2.1 or 4.3.1 or 4.4.3.

Table C.37: Note b shall be changed as indicated by the red markup below:

Product	Grade	Visual Inspection (see 9.14)	Wall Thickness Verification	Ultrasonic Inspection	Flux Leakage Inspection	Eddy Current Inspection	Magnetic Particle Inspection <sup>a</sup>
1	2	3	4	5	6	7	8
	H40, J55, K55	R	N	N	N	N	N
Pipe and accessory material	N80, L80, R95	R	R	А	А	А	А
material	P110	R	R	Α	А	Α	NA
	Q125	R	R	С	В	В	В
Pipe	C90, T95, C110	R	R	C (A) b	B (A) <sup>b</sup>	B (A) <sup>b</sup>	B (NA) <sup>b</sup>
Accessory material	C90, T95, C110	R	R	C (A) b	B (A) <sup>b</sup>	B (A) <sup>b</sup>	B (A) <sup>b</sup>
	H40, J55, K55	R	NA	N	N	N	N
Coupling stock	N80, L80, R95, P110, C90, T95, C110, Q125	R	R	А	А	А	А

A = one method or any combination of methods shall be used; B = at least one method shall be used in addition to ultrasonic inspection to inspect on the outside surface; C = ultrasonic inspection shall be used to inspect the outside and inside surface; N = not required; NA = not applicable; R = required.

<sup>&</sup>lt;sup>a</sup> MPI is permitted for end-area inspection. MPI is permitted for pipe-body outside-surface inspection in combination with other methods of pipe body inspection. MPI is permitted for coupling stock outside surface inspection and coupling stock oblique inspection. Coupling stock receiving full-length MPI does not require full-length wall thickness verification; however, mechanical wall thickness measurement of each end is required. MPI is permitted for the pipe OD and ID when inspected on the ends of the pipe uninspected area.

b Values in parenthesis () are specific to oblique angled defects.

Table C.43: Groups 4, 5, and 6 shall be changed as indicated by the red markup below:

			Stenc	il and/or Stam	ıp Marki	ng Requireme	ents <sup>a</sup>
		Mark or		0, J55, K55, and P110		es L80, C90, 10, and Q125	All Grades
	Marking Sequence	Symbol <sup>b</sup>	Pipe	Couplings and Accessories	Pipe	Couplings and Accessories	Coupling Stock and Accessory Materials
1	2	3	4	5	6	7	8
4	Size designation (fill in Label 1 designation from column 1 of Table C.1 or Table C.2) Specified diameter for coupling stock and other products with no Label 1 designation in Table C.1 or C.2	«»	Р		Р		Р
5	Mass designation (fill in Label 2 designation from Table C.1 or Table C.2) Specified wall thickness for coupling stock and other products with no Label 2 designation in Table C.1 or C.2	«»	D or P		Р		Р
	Grade of product:						
	— H40	Н					
6	— J55	J					
	— K55	K					
	— N80 Туре 1	N1					
	— N80Q	NQ					
	— R95	R					
	— L80 Туре 1	L					
	— L80 3Cr	L3CR					
	— L80 9Cr	L9					
6	— L80 13Cr	L13					
	— C90	C90					
	— T95	Т					
	— C110	C110					
	— P110	Р					
	— Q125	Q					
	All Grade designations		D or P	D or P	Р	Р	Р

Table C.43: Group 11 shall be changed as indicated by the red markup below:

Marking Sequence			Stenc	il and/or Stam	ıp Marki	ng Requireme	nts <sup>a</sup>
		Mark or	Grades H40, J55, K55, N80, R95, and P110			es L80, C90, 10, and Q125	All Grades
		Symbol <sup>b</sup>	Pipe	Couplings and Accessories	Pipe	Couplings and Accessories	Coupling Stock and Accessory Materials
1	2	3	4	5	6	7	8
	Supplementary requirements, if applicable:						
	— A.2 (SR 1)	S1	Р		Р		
	— A.3 (SR 2)	S2	Р		Р		
	— A.4 (SR 9)	S9				Р	
	— A.8 (SR 13)	S13		D or P		Р	
	<ul> <li>A.9 (SR 16) (fill in minimum full-size energy absorption requirement, in joules, and test temperature including ± symbol and °C)</li> </ul>	S16«»C	Р		Р		
11	— A.13 (SR 41)	S41.1	Р		Р		
		S41.2	Р		Р		
	— A.14 (SR 42)	S42	Р				
	— A.15 (SR 43)	S43			Р	D <sup>d</sup> or P	
	— A.16 (SR 44)	S44			Р	D <sup>d</sup> or P	
	— A.17 (SR 45)	S45			Р	D <sup>d</sup> or P	
	— A.18 (SR 46)	S46	D or P	D or P	Р		
	— A.19 (SR 47)	S47	Р	D	Р	D <sup>d</sup> or P	
	— A.20 (SR 48)	S48	Р		Р	D <sup>d</sup> or P	
	— A.21 (SR 49)	S49	Р	D	Р	D <sup>d</sup> or P	

Figure D.17: Figures and Note c shall be changed as indicated by the red markup below:



**Stencil Marking** [beginning at least 0.6 m (2 ft) from either externally threaded end]



Stamp Marking—Optional [within approximately 0.3 m (1 ft) of either externally threaded end]

a) EXAMPLE 1 Tubing Label 1:  $2^{-7}/8$ , Label 2: 6.5, Grade N80 Type 1, electric-weld, external upset, threaded (by the manufacturer) pin-by-pin without couplings.

Manufacturer's API 5CT X<sup>c</sup> PE 2-7/8 (or 2.875) 8.7 L S S2 P<sup>a</sup> D name or mark

Stencil Marking [beginning at least 0.6 m (2 ft) from either end]

b) EXAMPLE 2 Tubing Label 1:  $2^{7}/_{8}$ , Label 2: 8.7, Grade L80 Type 1, seamless, external upset, plainend. Additional requirements include hydrostatic testing to 94.5 MPa (13,700 psi) and inspection to SR 2.

Manufacturer's API 5CT X<sup>c</sup> PE 7 35 C90-1 A S S16<sup>b</sup> P<sup>a</sup> D 201 name or mark

Stencil Marking [beginning at least 0.6 m (2 ft) from either end]

201

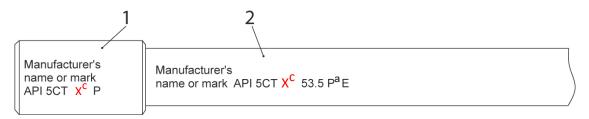
Stamp Marking—Optional [within approximately 0.3 m (1 ft) from either end]

c) EXAMPLE 3 Casing Label 1: 7, Label 2: 35, Grade C90 Type 1, seamless, plain-end, serial number 201. Supplementary requirement 16 (SR 16) for test at -10 °C (+14 °F). The pipe was pressure-tested to 69 MPa (10,000 psi).

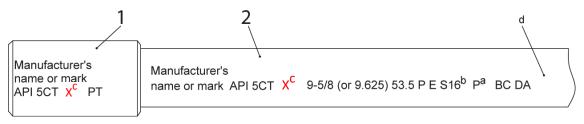
Figure D.1—Examples of Marking Requirements and Sequence for Manufacturers and Threaders
Using Section 10 and Table C.43 or Table E.43



d) EXAMPLE 4 <sup>e</sup> Tubing coupling for Label 1; 2 <sup>7</sup>/<sub>8</sub>, Grade J55, normalized upset (or non-upset) tubing, only visual inspection required.



**Stamp Marking—Optional** [within approximately 0.3 m (1 ft) from the coupling]



Stencil Marking [beginning not less than 0.6 m (2 ft) from the coupling]

e) EXAMPLE 5  $^{\rm e}$  Buttress casing with coupling: Label 1: 9  $^{\rm 5}$ /<sub>8</sub>, Label 2: 53.5, Grade P110, electric-weld; supplementary requirements are SR 11 and SR 16 for test at -18  $^{\rm e}$ C (0  $^{\rm e}$ F) and 215.9 mm (8.500 in.) drift test. Coupling is tin-plated.

Figure D.17—Examples of Marking Requirements and Sequence for Manufacturers and Threaders
Using Section 10 and Table C.43 or Table E.43 (continued)



### Stencil Marking (adjacent to the threads)

f) EXAMPLE 6 f Threader: Label 1: 2  $^{3}$ /8, Label 2: 4, Grade J55 non-upset thread, and hydrostatically tested to alternative test pressure of 43.5 MPa (6300 psi).

### Key

- 1 coupling
- 2 pipe
- Express pressure in megapascals for pipe manufactured to SI units and in pounds per square inch for pipe manufactured to USC units.
- b Express the CVN requirements in joules and the temperature in degrees Celsius for pipe manufactured to SI units, and in foot-pounds and degrees Fahrenheit for pipe manufactured to USC units.
- Date of manufacture—This example is for product manufactured in accordance with the current edition of API 5CT during the period of overlap with application (see 10.1.9) of the previous edition. Note that "X" is used for the date of manufacture so that it is a generic example that will not change with subsequent editions of this standard.
- Express alternative drift diameter in millimeters for pipe manufactured to SI units and in inches for pipe manufactured to USC units
- e Marking in the center of the coupling may be in either the longitudinal or transverse direction.
- f Threader stencil marking shall be placed adjacent to the threads and is in addition to marking applied by other pipe manufacturers.

Figure D.17—Examples of Marking Requirements and Sequence for Manufacturers and Threaders
Using Section 10 and Table C.43 or Table E.43 (continued)

**Figure D.19**: The table header shall be changed as indicated by the red markup below:

		C	oupling Dimens mm (in.)	ions	Ring Dimensions mm (in.)			
8 Round Casing Label 1	Outside Diameter	A ±3.2 (±0.125)	B ±0.13 (±0.005)	C ±0.25 (±0.010)	D ±0.38 (±0.015)	E +0.25 0 (+0.010)	F +0.38 0 (+0.015)	
1	2	3	4	5	6	7	8	

**<u>Figure D.20</u>**: Table header and column 6 values shall be changed as indicated by the red markup below:

		Co	oupling Dimension mm (in.)	ons <sup>b</sup>	Ring Dimensions mm (in.)			
Buttress Casing Label 1	Outside Diameter	A ±3.2 (±0.125)	B ±0.13 (±0.005)	C ±0.25 (±0.010)	D ±0.38 (±0.015)	E +0.25 0 (+0.010)	F +0.38 0 (+0.015)	
1	2	3	4	5	6	7	8	
4 1/2	114.30	76.2 (3.000)	4.78 (0.188)	115.21 (4.536)	115.85 (4.561)	2.54 (0.100)	3.96 (0.156)	
5	127.00	81.0 (3.188)	4.78 (0.188)	127.46 (5.018)	128.09 (5.043)	2.54 (0.100)	3.96 (0.156)	
5 <sup>1</sup> / <sub>2</sub>	139.70	81.0 (3.188)	4.78 (0.188)	140.16 (5.518)	140.79 (5.543)	2.54 (0.100)	3.96 (0.156)	
6 <sup>5</sup> / <sub>8</sub>	168.28	81.0 (3.188)	4.78 (0.188)	168.73 (6.643)	169.37 (6.668)	2.54 (0.100)	3.96 (0.156)	
7	177.80	82.6 (3.250)	4.78 (0.188)	178.16 (7.014)	178.79 (7.039)	2.54 (0.100)	3.96 (0.156)	
7 5/8	193.68	85.7 (3.375)	4.78 (0.188)	193.85 (7.632)	194.49 (7.657)	2.54 (0.100)	3.96 (0.156)	
8 5/8	219.09	85.7 (3.375)	4.78 (0.188)	219.25 (8.632)	219.89 (8.657)	2.54 (0.100)	3.96 (0.156)	
9 5/8	244.48	85.7 (3.375)	4.78 (0.188)	244.65 (9.632)	245.29 (9.657)	2.54 (0.100)	3.96 (0.156)	
10 <sup>3</sup> / <sub>4</sub>	273.05	85.7 (3.375)	4.78 (0.188)	273.23 (10.757)	273.86 (10.782)	2.54 (0.100)	3.96 (0.156)	
11 <sup>3</sup> / <sub>4</sub>	298.45	88.9 (3.500)	4.78 (0.188)	298.42 (11.749)	299.06 (11.774)	2.54 (0.100)	3.96 (0.156)	
13 <sup>3</sup> / <sub>8</sub>	339.72	95.3 (3.750)	4.78 (0.188)	339.29 (13.358)	339.93 (13.383)	2.54 (0.100)	3.96 (0.156)	

**Table E.39**: Footnote a shall be changed as indicated by the red markup below:

Acceptance (Inspection) Level	Notch Depth <sup>a</sup> Maximum %	Notch Length Maximum for Eddy Current in.	Notch Length Maximum at Full Depth (Methods Other Than Eddy Current) in.	Notch Width Maximum in.	Radially Drilled Hole Diameter <sup>b</sup> in.	
1	2	3	4	5	6	
L2	5	1.5	2.0	0.040	<sup>1</sup> / <sub>16</sub>	
L3	10	1.5	2.0	0.040	1/8	
L4	12.5	1.5	2.0	0.040	1/8	

NOTE See Figure D.18.

Depth as a percent of specified wall thickness; the depth tolerance shall be ±15 % of the calculated notch depth with a minimum notch depth of 0.012 in. +/- 0.002 in.

b Drilled hole diameter (through the pipe wall) shall be based on the drill bit size.

**Table E.43**: Groups 4, 5, and 6 shall be changed as indicated by the red markup below:

Marking Sequence		Mark or Symbol <sup>b</sup>	Stencil and/or Stamp Marking Requirements <sup>a</sup>				
			Grades H40, J55, K55, N80, R95, and P110		Grades L80, C90, T95, C110, and Q125		All Grades
			Pipe	Couplings and Accessories	Pipe	Couplings and Accessories	Coupling Stock and Accessory Materials
1	2	3	4	5	6	7	8
4	Size designation (fill in Label 1 designation from column 1 of Table E.1 or Table E.2) Specified diameter for coupling stock and other products with no Label 1 designation in Table E.1 or E.2	«»	Р		Р		Р
5	Mass designation (fill in Label 2 designation from Table E.1 or Table E.2) Specified wall thickness for coupling stock and other products with no Label 2 designation in Table E.1 or E.2	«»	D or P		Р		Р
	Grade of product:						
	— H40	Н					
6	— J55	J					
	— K55	K					
	— N80 Type 1	N1					
	— N80Q	NQ					
	— R95	R					
	— L80 Туре 1	L					
	— L80 3Cr	L3Cr					
	— L80 9Cr	L9					
6	— L80 13Cr	L13					
	— C90	C90					
	— T95	Т					
	— C110	C110					
	— P110	Р					
	— Q125	Q					
	All Grade designations		D or P	D or P	Р	Р	Р

<u>Table E.43</u>: Group 11 shall be changed as indicated by the <u>red markup</u> below:

			Stencil and/or Stamp Marking Requirements <sup>a</sup>					
Marking Sequence		Mark or Symbol <sup>b</sup>	Grades H40, J55, K55, N80, R95, and P110		Grades L80, C90, T95, C110, and Q125		All Grades	
			Pipe	Couplings and Accessories	Pipe	Couplings and Accessories	Coupling Stock and Accessory Materials	
1	2	3	4	5	6	7	8	
	Supplementary requirements, if applicable:							
	— A.2 (SR 1)	S1	Р		Р			
	— A.3 (SR 2)	S2	Р		Р			
	— A.4 (SR 9)	S9				Р		
	— A.8 (SR 13)	S13		D or P		Р		
	A.9 (SR 16) (fill in minimum full-size energy absorption requirement, in ft·lb, and test temperature including ± symbol and °F)	S16«»F	Р		Р			
11	— A.13 (SR 41)	S41.1 S41.2	P P		P P			
	— A.14 (SR 42)	S42						
	— A.15 (SR 43)	S43			Р	D <sup>d</sup> or P		
	— A.16 (SR 44)	S44			Р	D <sup>d</sup> or P		
	— A.17 (SR 45)	S45			Р	D <sup>d</sup> or P		
	— A.18 (SR 46)	S46	D or P	D or P	Р		_	
	— A.19 (SR 47)	S47	Р	D	Р	D <sup>d</sup> or P		
	— A.20 (SR 48)	S48	Р		Р	D <sup>d</sup> or P		
	— A.21 (SR 49)	S49	Р	D	Р	D <sup>d</sup> or P		