

Affected Publication: API Specification 11B, *Sucker Rods and Rod-related Products*, 28th Edition, December 2023

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Addendum 2

Section 3: The following definition shall be added:

3.1.62

surface conditioning

A controlled mechanical surface treatment method applied to rod products to modify and enhance the rod for improved fatigue performance

Section 6: The following requirement shall be added:

6.2.1 Products Requiring Design

Design shall be required for the following products:

- a) Pumping Tees
- b) Stuffing boxes
- c) Polished Rod Clamps

Annex C: The following title shall be updated:

C.2 Technical Requirements

Annex C: The following requirement shall be updated:

C.2.1 The following general requirements shall be followed in the manufacturing of steel sucker rods and pony rods.

C.4.4.3 The maximum allowable circular runout is 0.065 in. (1.65 mm)

C.4.5.3 Longitudinal and transverse discontinuities are acceptable provided the depth or height does not exceed 0.032 in. (0.8 mm) from the adjacent surfaces and need not be removed. Longitudinal and transverse discontinuities with depth greater than 0.032 in. (0.8 mm) are unacceptable and shall be removed to attain a smooth transition. Surface discontinuities shall be removed prior to surface conditioning. After removal, all dimensional requirements shall be met.

Annex E: The following title shall be updated:

E.2 Technical Requirements

Annex E: The following requirement shall be updated

E.2.1 The following general requirements shall be followed in the manufacturing of sinker bars.

Annex F: The following title shall be updated:

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F.2 Technical Requirements

Annex F: The following requirement shall be updated

F.2.1 The following general requirements shall be followed in the manufacturing of polished rods.

Annex G: The following title shall be updated:

G.2 Technical Requirements

Annex G: The following requirement shall be updated

G.2.1 The following general requirements shall be followed in the manufacturing of couplings and sub-couplings.

Annex G: The first paragraph of the following requirement shall be revised:

G.3.2.3 If a manufacturer develops a correlation between hardness and the mechanical properties of a finished product for a grade and series of steel, the manufacturer can elect to use a correlation of the hardness testing as proof of compliance to this specification.

Annex H: The following title shall be updated:

H.2 Technical Requirements

Annex H: The following requirement shall be updated

H.2.1 The thread form is based on the unified thread form with Class 2A-2B tolerances and allowances, as defined in ANSI/ASME B1.2, and shall be manufactured to properly gauge product threads as defined in Annex B.

Annex H: The highlighted text in the tables below shall be updated

Table H.1

Nominal Size of Rod			⁵ / ₈ in.		³ / ₄ in.		⁷ / ₈ in.		1 in.		1 ¹ / ₈ in.	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
P7 ^a	P7B _{st} Truncated major diameter	Maximum	0.921 6	23.409	1.0465	26.581	1.171 5	29.756	1.358 9	34.516	1.5463	39.276
		Minimum	0.921 0	23.393	1.0459	26.566	1.170 9	29.741	1.358 3	34.501	1.5457	39.261
	P7B _s Full-form major diameter	Maximum	0.936 8	23.795	1.0617	26.967	1.186 7	30.142	1.374 1	34.902	1.5615	39.662
		Minimum	0.936 2	23.779	1.0611	26.952	1.186 1	30.127	1.373 5	34.887	1.5609	39.647
	P7E _s Pitch diameter	Maximum	0.871 2	22.128	0.9962	25.303	1.121 1	28.476	1.308 5	33.236	1.4960 0	37.998 4
		Minimum	0.871 0	22.123	0.9960	25.298	1.120 9	28.471	1.308 3	33.231	1.4957 5	37.992 1
	P7L _s Length of thread	Maximum	1.983	50.37	2.203	55.96	2.421	61.49	2.671	67.84	3.015	76.58
		Minimum	1.953	49.61	2.173	55.19	2.391	60.73	2.641	67.08	2.985	75.82
	P7L _{st} Length of truncated portion (¹ / ₂ of P7L _s)	Maximum	0.999	25.37	1.109	28.17	1.218	30.94	1.343	34.11	1.515	38.48
		Minimum	0.969	24.61	1.079	27.41	1.188	30.18	1.313	33.35	1.485	37.72
	P7D _{tr} ^b Diameter of thread relief	Maximum	0.765	19.43	0.890	22.61	1.015	25.78	1.203	30.56	1.390	35.31
	P7L _p	Maximum	2.299	58.39	2.597	65.96	2.893	73.48	3.268	83.01	3.690	93.73

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P8 ^a	Length of plug	Minimum	2.269	57.63	2.567	65.20	2.863	72.72	3.238	82.25	3.660	92.96
	P7D _i	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
	Diameter of plug collar	Minimum	1.245	31.62	1.495	37.97	1.620	41.15	1.995	50.67	2.255	57.28
	P8D _i	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
	Diameter of ring collar	Minimum	1.245	31.62	1.495	37.97	1.620	41.15	1.995	50.67	2.255	57.28
	P8K _s Minor diameter	Maximum	0.827 9	21.029	0.9529	24.204	1.077 8	27.376	1.265 2	32.136	1.4527	36.899
		Minimum	0.827 3	21.013	0.9523	24.188	1.077 2	27.361	1.264 6	32.121	1.4521	36.883
	P8D _q Diameter of counterbore	Maximum	0.960	24.38	1.085	27.56	1.210	30.73	1.398	35.51	1.585	40.26
		Minimum	0.955	24.26	1.080	27.43	1.205	30.61	1.393	35.38	1.580	40.13
	P8L _r Length of ring	Maximum	1.250	31.75	1.438	36.53	1.625	41.28	1.875	47.63	2.125	53.98
		Minimum	1.230	31.24	1.418	36.02	1.605	40.77	1.855	47.12	2.105	53.47
	P8L _q Length of counterbore	Maximum	0.331	8.41	0.409	10.39	0.487	12.37	0.612	15.54	0.690	17.53
		Minimum	0.301	7.65	0.379	9.63	0.457	11.61	0.582	14.78	0.660	16.76

^a The P7 and P8 gauges are for sucker rod threads with a stress relief.

^b This dimension defined by: P8K_s – 0.0625 in.

Table H.6

Nominal Size of Rod			⁵ / ₈ in.		³ / ₄ in.		⁷ / ₈ in.		1 in.		1 1/8 in.	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
P1	P1B _{st} Truncated major diameter	Maximum	0.921 6	23.40 9	1.046 5	26.58 1	1.171 5	29.756	1.3589	34.51 6	1.5463	39.276
		Minimum	0.921 0	23.39 3	1.045 9	26.56 6	1.170 9	29.741	1.3583	34.50 1	1.5457	39.261
	P1B _s Full-form major diameter	Maximum	0.936 8	23.79 5	1.061 7	26.96 7	1.186 7	30.142	1.3741	34.90 2	1.5615	39.662
		Minimum	0.936 2	23.77 9	1.061 1	26.95 2	1.186 1	30.127	1.3735	34.88 7	1.5609	39.647
	P1L _{st} Length of truncated portion	Maximum	0.640	16.26	0.890	22.61	0.890	22.61	1.265	32.13	1.515	38.48
		Minimum	0.610	15.49	0.860	21.84	0.860	21.84	1.235	31.37	1.485	37.72
	P1D _{tr} ^a Diameter of thread relief	Maximum	0.762	19.35	0.890	22.61	1.015	25.78	1.203	30.56	1.390	35.31
	P1E _s Pitch diameter	Maximum	0.871 2	22.12 8	0.996 2	25.30 3	1.121 1	28.476	1.3085	33.23 6	1.4960 0	37.998 4
		Minimum	0.871 0	22.12 3	0.996 0	25.29 8	1.120 9	28.471	1.3083	33.23 1	1.4957 5	37.992 1
	P1L _s Length of thread	Maximum	1.265	32.13	1.765	44.83	1.765	44.83	2.515	63.88	3.015	76.58
		Minimum	1.235	31.37	1.735	44.07	1.735	44.07	2.485	63.12	2.985	75.82
	P1L _p Length of plug	Maximum	1.815	46.10	2.315	58.80	2.315	58.80	3.065	77.85	3.565	90.55
		Minimum	1.785	45.34	2.285	58.04	2.285	58.04	3.035	77.09	3.535	89.79
	P1D _r Diameter of plug collar	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
		Minimum	1.245	31.62	1.495	37.97	1.620	41.14	1.995	50.67	2.255	57.27
P2	P2D _r Diameter of ring collar	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
		Minimum	1.254	31.85	1.504	38.20	1.629	41.38	2.004	50.90	2.264	57.51
	P2K _s Minor diameter	Maximum	0.827 9	21.02 9	0.952 9	24.20 4	1.077 8	27.376	1.2652	32.13 6	1.4527	36.899
		Minimum	0.827 3	21.01 3	0.952 3	24.18 8	1.077 2	27.361	1.2646	32.12 1	1.4521	36.883
	P2D _q	Maximum	0.960	24.38	1.085	27.56	1.210	30.73	1.398	35.51	1.585	40.26

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	Diameter of counterbore	Minimum	0.955	24.26	1.080	27.43	1.205	30.61	1.393	35.38	1.580	40.13
	P2L _f	Maximum	1.125	28.58	1.375	34.93	1.375	34.93	1.750	44.45	2.000	50.80
	Length of ring	Minimum	1.105	28.07	1.355	34.42	1.355	34.42	1.730	43.94	1.980	50.29

NOTE A P1D_{tr} is defined by the equation: P2K_s – 0.0625 in. (1.5875 mm).

Table H.7

Nominal Size of Rod			5/8 in.		3/4 in.		7/8 in.		1 in.		1 1/8 in.	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
P3	P3B _s	Maximum	0.9462	24.033	1.0716	27.219	1.1966	30.394	1.3846	35.169	1.5724	39.939
	Major diameter	Minimum	0.9456	24.018	1.0710	27.203	1.1960	30.378	1.3840	35.154	1.5718	39.924
	P3D _{tr} ^a	Maximum	0.789	20.04	0.914	23.22	1.039	26.39	1.226	31.14	1.414	35.92
	Diameter of thread relief											
	P3E _s	Maximum	0.8806	22.367	1.0060	25.552	1.1310	28.727	1.3190	33.503	1.5068	38.273
	Pitch diameter	Minimum	0.8801	22.355	1.0055	25.540	1.1305	28.715	1.3185	33.490	1.5063	38.260
	P3L _s	Maximum	0.645	16.38	0.895	22.73	0.895	22.73	1.275	32.39	1.525	38.74
	Length of thread	Minimum	0.615	15.62	0.865	21.97	0.865	21.97	1.245	31.62	1.495	37.97
	P3L _p	Maximum	1.045	26.54	1.295	32.89	1.295	32.89	1.675	42.55	1.925	48.90
	Length of plug	Minimum	1.015	25.78	1.265	32.13	1.265	32.13	1.645	41.78	1.895	48.13
	P3L _{gp}	Defined	0.325	8.26	0.325	8.26	0.325	8.26	0.325	8.26	0.325	8.26
	P3L _l	Maximum	0.335	8.51	0.335	8.51	0.335	8.51	0.335	8.51	0.335	8.51
	Land length	Minimum	0.315	8.00	0.315	8.00	0.315	8.00	0.315	8.00	0.315	8.00
	P3D _{pc}	Maximum	0.9430	23.952	1.0680	27.127	1.1930	30.302	1.3805	35.065	1.5680	39.827
	Diameter of plug cone at gauge point	Minimum	0.9428	23.947	1.0678	27.122	1.1928	30.297	1.3803	35.060	1.5678	39.822
P4	P3D _f	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
	Diameter of plug collar	Minimum	1.245	31.62	1.495	37.97	1.620	41.15	1.995	50.67	2.255	57.28
	P4D _{rc} ^b	Reference	See footnote ^b		See footnote ^b		See footnote ^b		See footnote ^b		See footnote ^b	
	P4L _r	Maximum	1.045	26.54	1.295	32.89	1.295	32.89	1.675	42.55	1.925	48.90
	Length of ring	Minimum	1.015	25.78	1.265	32.13	1.265	32.13	1.645	41.78	1.895	48.13
	P4D _f	Maximum	1.255	31.88	1.505	38.23	1.630	41.40	2.005	50.93	2.265	57.53
	Diameter of ring collar	Minimum	1.245	31.62	1.495	37.97	1.620	41.15	1.995	50.67	2.255	57.28
	P4K _s	Maximum	0.851	21.62	0.976	24.79	1.101	27.97	1.288	32.72	1.476	37.49
	Minor diameter	Minimum	0.850	21.59	0.975	24.77	1.100	27.94	1.287	32.69	1.475	37.47

^a P3D_{tr} is defined by the equation: P4K_s – 0.0625 in. (1.5875 mm).

^b Diameter of ring cone P4D_{rc} shall be such as to provide a standoff of 0.325 in. (8.26 mm) ± 0.0015 in. (0.038 mm).

Annex L: The following requirement shall be updated:

L.3.2.4 Manufacturers shall define control of tape measures within their quality management system in accordance with API Q1.