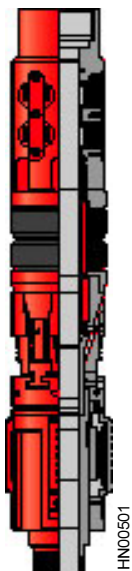
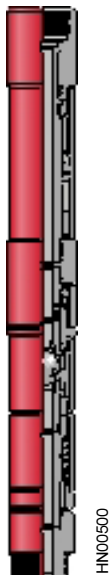


RTTS™ PACKER AND SSC™ II VALVE



RTTS PACKER

- Hookwall type retrievable packer designed for testing, treating, and squeezing.
- Optional integral circulating valve may be opened and locked at any time to allow circulation above the packer.
- Designed to hold pressure from either direction.
- Ideal for performing multiple operations on one or more zones with only one trip in the well.
- Large mandrel ID allows pumping large volumes of fluid with minimum pressure drop.
- Large ID also allows passage of tubing-type perforating guns.
- Sizes available to run in all standard casing sizes from 2³/₈-in. through 20-in. O.D.



SSC II VALVE

- Full-opening, ball-type, subsurface control valve.
- Can be installed without left-hand rotation eliminating the problems inherent when unscrewing pipe joints.
- Ball valve automatically closes to shut in the well when the SSC II is set down.
- Ball valve is opened by picking up and can be reclosed by setting back down if high pressure is detected below the valve.
- Only right-hand rotation is required to release the workstring from the valve.
- Rotation is not required to reattach the workstring to the valve.
- Can be used to test the blowout preventers during drilling.

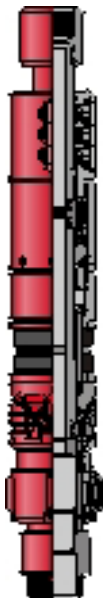
CHAMP® PACKERS



HN00503

CHAMP L/L PACKER

- Liner-lock feature allows the Champ packer to be locked in the running position until it lands on the appropriate liner.
- Excellent for use in highly deviated wells with deep liners.



HN00502

CHAMP PACKER

- Hookwall-type retrievable packer with a concentric bypass.
- Design helps eliminate problems associated with accidentally opening a conventional bypass during circulation around the bottom of the packer.
- Excellent for use in highly deviated wells or where pipe manipulation is difficult.
- Bypass can be opened by picking straight up (no torque required).
- Easy to relocate in multiple zones with only one trip in the well for treating, testing, or squeezing.

SECTION No. 200

DIMENSIONS and STRENGTHS

HALLIBURTON

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TABLE

DIMENSIONS AND STRENGTHS OF NON-UPSET

Size O.D. In.	Grade	Wt. per Ft. With Couplings, Lb.			Inside Diameter In.	Drift Diameter In.
		Non- Upset	Upset	Integral Joint		
1.050	C-75	1.14	1.20	1.20	.824	.730
	C-90	1.14	1.20	—	.824	.730
	F-25*	—	1.20	—	.824	.730
	H-40	1.14	1.20	—	.824	.730
	J-55	1.14	1.20	1.20	.824	.730
	L-80	1.14	1.20	—	.824	.730
	N-80	1.14	1.20	1.20	.824	.730
	N-80†	1.14	1.20	—	.824	.730
	T-95	1.14	1.20	—	.824	.730
1.315	C-75	1.70	1.80	1.72	1.049	.955
	C-75*	—	—	2.25	.957	.848
	F-25*	—	1.80	—	1.049	.955
	H-40	1.70	1.80	1.72	1.049	.955
	J-55	1.70	1.80	1.72	1.049	.955
	J-55*	—	—	2.25	.957	.848
	L-80	1.70	1.80	—	1.049	.955
	LS-65	1.70	1.80	—	1.049	.955
	N-80	1.70	1.80	1.72	1.049	.955
	N-80*	—	—	2.25	.957	.848
	P-105*	—	—	2.25	.957	.848
	T-95	1.70	1.80	—	1.049	.955
	1.660	C-75	2.30	2.40	2.33	1.380
C-75*		—	—	3.02	1.278	1.184
C-90		2.30	2.40	—	1.380	1.286
F-25*		—	2.40	—	1.380	1.286
H-40		—	—	2.10	1.410	1.286
H-40		2.30	2.40	2.33	1.380	1.286
J-55		—	—	2.10	1.410	1.286
J-55		2.30	2.40	2.33	1.380	1.286
J-55*		—	—	3.02	1.278	1.184
L-80		2.30	2.40	—	1.380	1.286
LS-65†		2.30	2.40	—	1.380	1.286
N-80		2.30	2.40	2.33	1.380	1.286
N-80*		—	—	3.02	1.278	1.184
P-105*		—	—	3.02	1.278	1.184
T-95		2.30	2.40	—	1.380	1.286
1.900	C-75	2.75	2.90	2.76	1.610	1.516
	C-75*	—	—	3.64	1.500	1.406
	C-90	2.75	2.90	—	1.610	1.516
	F-25*	2.75	2.90	—	1.610	1.516
	H-40	—	—	2.40	1.650	1.516
	H-40	2.75	2.90	2.76	1.610	1.516
	J-55	—	—	2.40	1.650	1.516
	J-55	2.75	2.90	2.76	1.610	1.516
	J-55*	—	—	3.64	1.500	1.406

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

NO. 201

EXTERNAL UPSET & INTEGRAL JOINT TUBING

Threaded & Coupled			Integral Joint Box O.D. In.	** Collapse Resist. psi	** Internal Yield Pressure psi	Joint Yield Strength, Lb.***		
O.D. of Cplg., In.		O.D. of Upset In.				Threaded & Coupled		Integral Joint
Non- Upset	Upset					Non- Upset	Upset	
1.313	1.660	1.315	1.327	14,410	14,120	11,920	24,950	25,000
—	—	—	—	17,290	16,950	14,300	29,900	—
—	1.660	1.315	—	5,960	4,710	8,320	—	—
1.313	1.660	1.315	—	7,680	7,530	6,360	13,310	—
1.313	1.660	1.315	1.327	10,560	10,360	8,740	18,290	18,000
—	—	—	—	15,370	15,070	12,720	26,600	—
1.313	1.660	1.315	1.327	15,370	15,070	12,710	26,610	27,000
—	—	—	—	15,370	15,070	12,720	26,600	—
—	—	—	—	18,250	17,890	15,100	31,600	—
1.660	1.900	1.469	1.550	13,640	13,270	20,540	37,040	29,940
—	—	—	1.600	17,640	17,870	—	—	48,000
—	1.900	1.469	—	5,540	4,430	—	12,350	—
1.660	1.900	1.469	1.550	7,270	7,080	10,960	19,760	15,970
1.660	1.900	1.469	1.550	10,000	9,730	15,060	27,160	21,960
—	—	—	1.600	12,940	13,100	—	—	35,000
—	—	—	—	14,550	14,160	21,910	39,500	—
—	—	—	—	11,820	11,500	17,800	32,100	—
1.660	1.900	1.469	1.550	14,550	14,160	21,910	39,510	31,940
—	—	—	1.600	18,820	19,060	—	—	51,000
—	—	—	1.600	24,700	25,010	—	—	67,000
—	—	—	—	17,270	16,810	26,020	46,900	—
2.054	2.200	1.812	1.880	11,580	11,070	29,120	50,140	41,600
—	—	—	1.927	15,270	15,100	—	—	66,000
—	—	—	—	13,900	13,80	34,900	60,200	—
—	2.200	1.812	—	4,440	3,690	—	16,710	—
—	—	—	1.880	5,570	5,270	—	—	22,180
2.054	2.200	1.812	1.880	6,180	5,900	15,530	26,740	22,180
—	—	—	1.880	7,660	7,250	—	—	30,500
2.054	2.200	1.812	1.880	8,490	8,120	21,360	36,770	30,500
—	—	—	1.927	11,200	11,070	—	—	48,000
—	—	—	—	12,360	11,810	31,060	53,500	—
—	—	—	—	10,040	9,590	25,240	43,500	—
2.054	2.200	1.812	1.880	12,360	11,810	31,060	53,480	44,370
—	—	—	1.927	16,290	16,110	—	—	71,000
—	—	—	1.927	21,380	21,140	—	—	93,000
—	—	—	—	14,670	14,020	36,900	63,500	—
2.200	2.500	2.094	2.110	10,570	10,020	35,800	59,960	50,420
—	—	—	2.162	14,130	13,820	—	—	80,000
—	—	—	—	12,620	12,020	43,000	72,000	—
2.200	2.500	2.094	—	3,920	3,340	11,930	19,990	—
—	—	—	2.110	4,920	4,610	—	—	26,890
2.200	2.500	2.094	2.110	5,640	5,340	19,090	31,980	26,890
—	—	—	2.110	6,640	6,330	—	—	36,970
2.200	2.500	2.094	2.110	7,750	7,350	26,250	43,970	36,970
—	—	—	2.162	10,360	10,130	—	—	57,000

** Collapse, Internal Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

TABLE

DIMENSIONS AND STRENGTHS OF NON-UPSET

Size O.D. In.	Grade	Wt. per Ft. With Couplings, Lb.			Inside Diameter In.	Drift Diameter In.
		Non- Upset	Upset	Integral Joint		
	L-80	2.75	2.90	—	1.610	1.516
	LS-65†	2.75	2.90	—	1.610	1.516
	N-80	2.75	2.90	2.76	1.610	1.516
	N-80*	—	—	3.64	1.500	1.406
	P-105*	—	—	3.64	1.500	1.406
	T-95	2.75	2.90	—	1.610	1.516
2.063	C-75	—	—	3.25	1.751	1.657
	C-90	—	3.25	—	1.751	1.657
	H-40	—	—	3.25	1.751	1.657
	J-55	—	—	3.25	1.751	1.657
	L-80	—	3.25	—	1.751	1.657
	LS-65†	—	3.25	—	1.751	1.657
	N-80	—	—	3.25	1.751	1.657
	P-110	—	3.25	—	1.751	1.657
	T-95	—	3.25	—	1.751	1.657
2.375	C-75	4.00	—	—	2.041	1.947
	C-75	4.60	4.70	4.70	1.995	1.901
	C-75	5.80	5.95	5.95	1.867	1.773
	C-75*	—	—	5.30	1.939	1.845
	C-75*	—	—	6.20	1.853	1.759
	C-75*	—	—	7.70	1.703	1.609
	C-90	4.00	—	—	2.041	1.947
	C-90	4.60	4.70	—	1.995	1.901
	C-90	5.80	5.95	—	1.867	1.773
	F-25*	4.00	—	—	2.041	1.947
	F-25*	4.60	4.70	—	1.995	1.901
	H-40	4.00	—	—	2.041	1.947
	H-40	4.60	4.70	—	1.995	1.901
	J-55	4.00	—	—	2.041	1.947
	J-55	4.60	4.70	4.70	1.995	1.901
	J-55*	—	—	5.30	1.939	1.845
	J-55*	—	—	6.20	1.853	1.759
	J-55*	—	—	7.70	1.703	1.609
	L-80	4.00	—	—	2.041	1.947
	L-80†	4.60	4.70	—	1.995	1.901
	L-80†	5.80	5.95	—	1.867	1.773
	LS-66†	4.60	4.70	—	1.995	1.901
	N-80	4.00	—	—	2.041	1.947
	N-80	4.60	4.70	4.70	1.995	1.901
	N-80	5.80	5.95	5.95	1.867	1.773
	N-80*	—	—	5.30	1.939	1.845
	N-80*	—	—	6.20	1.853	1.759
	N-80*	—	—	7.70	1.703	1.609
	P-105	4.60	4.70	4.70	1.995	1.901
	P-105	5.80	5.95	5.95	1.867	1.773
	P-105*	—	—	5.30	1.939	1.845

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

NO. 201

EXTERNAL UPSET & INTEGRAL JOINT TUBING

Threaded & Coupled			Integral Joint Box O.D. In.	** Collapse Resist. psi	** Internal Yield Pressure psi	Joint Yield Strength, Lb.***		
O.D. of Cplg., In.		O.D. of Upset In.				Threaded & Coupled		Integral Joint
Non- Upset	Upset					Non- Upset	Upset	
—	—	—	—	11,280	10680	38200	64000	—
—	—	—	—	9,160	8680	31000	52000	—
2.200	2.500	2.094	2.110	11,280	10,680	38,180	63,960	53,780
—	—	—	2.162	15,070	14,740	—	—	84,000
—	—	—	2.162	19,780	19,340	—	—	110,000
—	—	—	—	13,440	12690	45300	75900	—
—	—	—	2.325	10,480	9,920	—	—	66,910
—	—	—	—	12,420	11,910	—	80,240	—
—	—	—	2.325	5,590	5,290	—	—	35,690
—	—	—	2.325	7,690	7,280	—	—	49,070
—	—	—	—	11,180	10,590	—	71,400	—
—	—	—	—	9,090	8,600	—	57,900	—
—	—	—	2.325	11,180	10,590	—	—	71,370
—	—	—	—	15,680	14,560	—	98,100	—
—	—	—	—	13,240	12,570	—	84,700	—
2.875	—	—	—	9,520	9,230	56,500	—	—
2.875	3.063	2.594	2.700	11,040	10,500	67,430	97,820	98,000
2.875	3.063	2.594	2.906	14,330	14,040	96,560	126,940	127,000
—	—	—	2.740	12,510	12,050	—	—	111,000
—	—	—	2.937	14,670	14,420	—	—	130,000
—	—	—	3.125	18,220	18,570	—	—	161,000
—	—	—	—	10,940	11,070	67,800	—	—
—	—	—	—	13,250	12,600	80,900	117,400	—
—	—	—	—	17,190	16,840	115,900	152,300	—
2.875	—	—	—	3,530	3,080	18,830	—	—
2.875	3.063	2.594	—	4,160	3,500	22,480	32,600	—
2.875	—	—	—	5,230	4,920	30,130	—	—
2.875	3.063	2.594	—	5,890	5,600	35,960	52,170	—
2.875	—	—	—	7,190	6,770	41,430	—	—
2.875	3.063	2.594	2.700	8,100	7,700	49,450	71,730	72,000
—	—	—	2.740	9,170	8,840	—	—	81,000
—	—	—	2.937	10,760	10,580	—	—	95,000
—	—	—	3.125	13,360	13,620	—	—	118,000
—	—	—	—	9,980	9,840	60,300	—	—
—	—	—	—	11,780	11,200	71,900	104,300	—
—	—	—	—	15,280	14,970	103,000	135,400	—
—	—	—	—	9,570	9,100	58,400	84,800	—
2.875	—	—	—	9,980	9,840	60,260	—	—
2.875	3.063	2.594	2.700	11,780	11,200	71,930	104,340	104,000
2.875	3.063	2.594	2.906	15,280	14,970	102,990	135,400	135,000
—	—	—	2.740	13,340	12,860	—	—	118,000
—	—	—	2.937	15,650	15,390	—	—	139,000
—	—	—	3.125	19,430	19,810	—	—	172,000
2.875	3.063	2.594	2.700	15,460	14,700	94,410	136,940	137,000
12.875	3.063	2.594	2.906	20,060	19,650	135,180	177,710	178,000
—	—	—	2.740	17,510	16,870	—	—	155,000

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TABLE

DIMENSIONS AND STRENGTHS OF NON-UPSET

Size O.D. In.	Grade	Wt. per Ft. With Couplings, Lb.			Inside Diameter In.	Drift Diameter In.
		Non- Upset	Upset	Integral Joint		
	P-105*	—	—	6.20	1.853	1.759
	P-105*	—	—	7.70	1.703	1.609
	P-110*	4.60	4.70	—	1.995	1.901
	P-110*	5.80	5.95	—	1.867	1.773
	T-95	4.00	—	—	2.041	1.947
	T-95	4.60	4.70	—	1.995	1.901
	T-95	5.80	5.95	—	1.867	1.773
2.875	C-75	6.40	6.50	6.50	2.441	2.347
	C-75	8.60	8.70	8.70	2.259	2.165
	C-75*	—	—	7.90	2.323	2.229
	C-75*	—	—	9.50	2.195	2.101
	C-75*	—	—	10.70	2.091	1.997
	C-75*	—	—	11.00	2.065	1.971
	C-90	6.40	6.50	—	2.441	2.347
	C-90	7.80	7.90	—	2.323	2.229
	C-90	8.60	8.70	—	2.259	2.165
	F-25*	6.40	6.50	—	2.441	2.347
	H-40	6.40	6.50	—	2.441	2.347
	J-55	6.40	6.50	6.50	2.441	2.347
	J-55*	—	—	7.90	2.323	2.229
	J-55*	—	—	8.70	2.259	2.165
	J-55*	—	—	9.50	2.195	2.101
	J-55*	—	—	10.70	2.091	1.997
	J-55*	—	—	11.00	2.065	1.971
	L-80	6.40	6.50	—	2.441	2.347
	L-80†	7.80	7.90	—	2.323	2.229
	L-80†	8.60	8.70	—	2.259	2.165
	LS-65†	6.40	6.50	—	2.441	2.347
	N-80	6.40	6.50	6.50	2.441	2.347
	N-80	8.60	8.70	8.70	2.259	2.165
	N-80*	—	—	7.90	2.323	2.229
	N-80*	—	—	9.50	2.195	2.101
	N-80*	—	—	10.70	2.091	1.997
	N-80*	—	—	11.00	2.065	1.971
	P-105	6.40	6.50	6.50	2.441	2.347
	P-105	8.60	8.70	8.70	2.259	2.165
	P-105*	—	—	7.90	2.323	2.229
	P-105*	—	—	9.50	2.195	2.101
	P-105*	—	—	10.70	2.091	1.997
	P-110	7.80	7.90	—	2.323	2.229
	P-110	8.60	8.70	—	2.259	2.165
	P-110*	6.40	6.50	—	2.441	2.347
	T-95	6.40	6.50	—	2.441	2.347
T-95	7.80	7.90	—	2.323	2.229	
T-95	8.60	8.70	—	2.259	2.165	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

NO. 201

EXTERNAL UPSET & INTEGRAL JOINT TUBING

Threaded & Coupled		Integral Joint Box O.D. In.	** Collapse Resist. psi	** Internal Yield Pressure psi	Joint Yield Strength, Lb.***			
O.D. of Cplg., In.					Integral Joint	Threaded & Coupled		
Non- Upset	Upset					Non- Upset	Upset	
—	—	—	2,937	20,540	20,200	—	—	182,000
—	—	—	3,125	25,510	26,010	—	—	226,000
2.875	3.063	2.594	—	13,800	15,400	98,900	143,470	—
2.875	3.063	2.594	—	17,910	20,590	141,610	186,170	—
—	—	—	—	11,410	11,690	71,600	—	—
—	—	—	—	13,980	13,300	85,400	123,900	—
—	—	—	—	18,150	17,780	122,300	160,800	—
3.500	3.668	3.094	3.220	10,470	9,910	98,970	135,900	136,000
3.500	3.668	3.094	3.500	14,350	14,060	149,360	186,290	186,000
—	—	—	3.437	13,020	12,600	—	—	169,000
—	—	—	3.625	15,640	15,520	—	—	203,000
—	—	—	3.687	17,670	17,890	—	—	229,000
—	—	—	3.750	18,150	18,490	—	—	236,000
—	—	—	—	12,380	11,890	118,800	163,100	—
—	—	—	—	15,620	15,120	158,500	202,800	—
—	—	—	—	17,220	16,870	179,200	223,500	—
3.500	3.668	3.094	—	3,870	3,300	32,990	45,300	—
3.500	3.668	3.094	—	5,580	5,280	52,780	72,480	—
3.500	3.668	3.094	3.220	7,680	7,260	72,580	99,660	100,000
—	—	—	3.437	9,550	9,250	—	—	124,000
—	—	—	3.500	10,530	10,320	—	—	137,000
—	—	—	3.625	11,470	11,390	—	—	149,000
—	—	—	3.687	12,960	13,120	—	—	168,000
—	—	—	3.750	13,310	13,570	—	—	173,000
—	—	—	—	11,170	10,570	105,600	145,000	—
—	—	—	—	13,890	13,440	140,900	180,300	—
—	—	—	—	15,300	15,000	159,300	198,700	—
—	—	—	—	9,070	8,590	85,800	117,800	—
3.500	3.668	3.094	3.220	11,160	10,570	105,570	144,960	145,000
3.500	3.668	3.094	3.500	15,300	15,000	159,310	198,710	198,000
—	—	—	3.437	13,890	13,450	—	—	180,000
—	—	—	3.625	16,690	16,560	—	—	217,000
—	—	—	3.687	18,850	19,090	—	—	245,000
—	—	—	3.750	19,360	19,730	—	—	251,000
3.500	3.668	3.094	3.220	14,010	13,870	138,560	190,260	190,000
3.500	3.668	3.094	3.500	20,090	19,690	209,100	260,810	261,000
—	—	—	3.437	18,230	17,650	—	—	236,000
—	—	—	3.625	21,900	21,730	—	—	285,000
—	—	—	3.687	24,740	25,050	—	—	321,000
—	—	—	—	19,090	18,480	193,700	247,900	—
—	—	—	—	21,040	20,620	219,100	273,200	—
3.500	3.668	3.094	—	13,080	14,530	145,160	199,320	—
—	—	—	—	12,940	12,550	125,400	172,100	—
—	—	—	—	16,490	15,960	167,300	214,100	—
—	—	—	—	18,170	17,810	189,200	236,000	—

** Collapse, Internal Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

TABLE

DIMENSIONS AND STRENGTHS OF NON-UPSET

Size O.D. In.	Grade	Wt. per Ft. With Couplings, Lb.			Inside Diameter In.	Drift Diameter In.
		Non- Upset	Upset	Integral Joint		
3.500	C-75	7.70	—	—	3.068	2.943
	C-75	9.20	9.30	9.30	2.992	2.867
	C-75	10.20	—	10.30	2.922	2.797
	C-75	12.70	12.95	12.95	2.750	2.625
	C-75*	—	—	12.80	2.764	2.639
	C-75*	—	—	15.80	2.548	2.423
	C-75*	—	—	16.70	2.480	2.355
	C-90	7.70	—	—	3.068	2.943
	C-90	9.20	9.30	—	2.992	2.867
	C-90	10.20	—	—	2.922	2.797
	F-25*	7.70	—	—	3.068	2.943
	F-25*	9.20	9.30	—	2.992	2.867
	F-25*	10.20	—	—	2.922	2.797
	H-40	7.70	—	—	3.068	2.943
	H-40	9.20	9.30	—	2.992	2.867
	H-40	10.20	—	—	2.922	2.797
	J-55	7.70	—	—	3.068	2.943
	J-55	9.20	9.30	9.30	2.992	2.867
	J-55	10.20	—	10.30	2.922	2.797
	J-55*	—	—	12.80	2.764	2.639
	J-55*	—	—	12.95	2.750	2.625
	J-55*	—	—	15.80	2.548	2.423
	J-55*	—	—	16.70	2.480	2.355
	L-80	7.70	—	—	3.068	2.943
	L-80	12.70	12.95	—	2.75	2.625
	L-80†	9.20	9.30	—	2.992	2.867
	L-80†	10.20	—	—	2.922	2.797
	LS-65	9.20	9.30	—	2.992	2.867
	LS-651	10.20	—	—	2.922	2.797
	N-80	7.70	—	—	3.068	2.943
	N-80	9.20	9.30	9.30	2.992	2.867
	N-80	10.20	—	10.30	2.922	2.797
	N-80	12.70	12.95	12.95	2.750	2.625
	N-80*	—	—	12.80	2.764	2.639
	N-80*	—	—	15.80	2.548	2.423
	N-80*	—	—	16.70	2.480	2.355
	P-105	9.20	9.30	9.30	2.992	2.867
	P-105	12.70	12.95	12.95	2.750	2.625
	P-105*	—	—	10.30	2.922	2.797
	P-105*	—	—	12.80	2.764	2.639
P-105*	—	—	15.80	2.548	2.423	
P-105*	—	—	16.70	2.480	2.355	
P-110	12.70	12.95	—	2.75	2.625	
P-110*	9.20	9.30	—	2.992	2.867	
P-110*	12.70	12.95	—	2.750	2.625	
T-95	7.70	—	—	3.068	2.943	
T-95	9.20	9.30	—	2.992	2.867	
T-95	10.20	—	—	2.922	2.797	
T-95	12.70	12.95	—	2.75	2.625	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

NO. 201

EXTERNAL UPSET & INTEGRAL JOINT TUBING

Threaded & Coupled		Integral Joint Box O.D. In.	** Collapse Resist. psi	** Internal Yield Pressure psi	Joint Yield Strength, Lb.***			
O.D. of Cplg., In.					Threaded & Coupled		Integral Joint	
Non- Upset	Upset				Non- Upset	Upset		
4.250	—	—	—	7,540	8,100	122,010	—	—
4.250	4.500	3.750	—	3,905	10,040	9,520	149,140	194,260
4.250	—	—	—	3,955	11,360	10,840	173,530	—
4.250	4.500	3.750	—	4.312	14,350	14,060	230,990	276,120
—	—	—	—	4.312	14,110	13,800	—	—
—	—	—	—	4.500	17,630	17,850	—	—
—	—	—	—	4.562	18,670	19,130	—	—
—	—	—	—	—	8,540	9,720	146,400	—
—	—	—	—	—	11,570	11,430	179,000	233,100
—	—	—	—	—	13,640	13,010	208,200	—
4.250	—	—	—	2,970	2,700	40,670	—	—
4.250	4.500	3.750	—	3,680	3,180	49,710	64,760	—
4.250	—	—	—	4,330	3,610	57,840	—	—
4.250	—	—	—	4,630	4,320	65,070	—	—
4.250	4.500	3.750	—	5,380	5,080	79,540	103,610	—
4.250	—	—	—	6,060	5,780	92,550	—	—
4.250	—	—	—	5,970	5,940	89,470	—	—
4.250	4.500	3.750	—	3,905	7,400	6,980	109,370	142,460
4.250	—	—	—	3,955	8,330	7,950	127,250	—
—	—	—	—	4.312	10,350	10,120	—	—
—	—	—	—	4.312	10,530	10,230	—	—
—	—	—	—	4.500	12,950	13,090	—	—
—	—	—	—	4.562	13,690	14,020	—	—
—	—	—	—	—	7,870	8,640	130,100	—
—	—	—	—	—	15,310	15,000	246,400	294,500
—	—	—	—	—	10,540	10,160	159,100	207,200
—	—	—	—	—	12,120	11,560	185,100	—
—	—	—	—	—	8,750	8,260	129,300	168,400
—	—	—	—	—	9,850	9,390	150,400	—
4.250	—	—	—	—	7,870	8,640	130,140	—
4.250	4.500	3.750	—	3,905	10,530	10,160	159,090	207,220
4.250	—	—	—	3,955	12,120	11,560	185,100	—
4.250	4.500	3.750	—	4.312	15,310	15,000	246,390	294,530
—	—	—	—	4.312	15,060	14,730	—	—
—	—	—	—	4.500	18,800	19,040	—	—
—	—	—	—	4.562	19,920	20,400	—	—
4.250	4.500	3.750	—	3,905	13,050	13,330	208,800	271,970
4.250	4.500	3.750	—	4.312	20,090	19,690	323,390	386,560
—	—	—	—	3,955	15,920	15,180	—	—
—	—	—	—	4.312	19,760	19,320	—	—
—	—	—	—	4.500	24,680	24,990	—	—
—	—	—	—	4.562	26,140	26,770	—	—
—	—	—	—	—	21,050	20,630	338,800	405,000
4.250	4.500	3.750	—	—	12,620	13,970	218,740	284,920
4.250	4.500	3.750	—	—	17,940	20,630	338,790	365,570
—	—	—	—	—	8,850	10,260	154,500	—
—	—	—	—	—	12,080	12,070	188,900	246,100
—	—	—	—	—	14,390	13,730	219,800	—
—	—	—	—	—	18,180	17,810	292,600	349,700

** Collapse, Internal Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

TABLE

DIMENSIONS AND STRENGTHS OF NON-UPSET

Size O.D. In.	Grade	Wt. per Ft. With Couplings, Lb.			Inside Diameter In.	Drift Diameter In.
		Non- Upset	Upset	Integral Joint		
4.000	C-75	9.50	—	—	3.548	3.423
	C-75	—	—	13.40	3.340	3.215
	C-75*	—	11.00	11.00	3.476	3.351
	C-90	9.50	—	—	3.548	3.423
	C-90	—	11.00	—	3.476	3.351
	F-25*	9.50	—	—	3.548	3.423
	F-25*	—	11.00	—	3.476	3.351
	H-40	9.50	—	—	3.548	3.423
	H-40	—	11.00	—	3.476	3.351
	J-55	9.50	—	—	3.548	3.423
	J-55	—	11.00	11.00	3.476	3.351
	J-55*	—	—	11.60	3.428	3.303
	L-80	9.50	—	—	3.548	3.423
	L-80	—	11.00	—	3.476	3.351
	N-80	9.50	—	—	3.548	3.423
	N-80	—	11.00	11.00	3.476	3.351
	N-80*	—	—	13.40	3.340	3.215
	P-105*	—	—	11.00	3.476	3.351
	P-105*	—	—	13.40	3.340	3.215
	T-95	9.50	—	—	3.548	3.423
T-95	—	11.00	—	3.476	3.351	
4.500	C-75	12.60	12.75	12.75	3.958	3.833
	C-75*	—	—	13.50	3.920	3.795
	C-75*	—	—	15.50	3.826	3.701
	C-75*	—	—	19.20	3.640	3.515
	C-90	12.60	12.75	—	3.958	3.833
	F-25*	12.60	12.75	—	3.958	3.833
	H-40	12.60	12.75	—	3.958	3.833
	J-55	12.60	12.75	12.75	3.958	3.833
	J-55*	—	—	13.50	3.920	3.795
	L-80	12.60	12.75	—	3.958	3.833
	N-80	12.60	12.75	12.75	3.958	3.833
	N-80*	—	—	13.50	3.920	3.795
	N-80*	—	—	15.50	3.826	3.701
	N-80*	—	—	19.20	3.640	3.515
	P-105*	—	—	12.75	3.958	3.833
	P-105*	—	—	13.50	3.920	3.795
	P-105*	—	—	15.50	3.826	3.701
	P-105*	—	—	19.20	3.640	3.515
	T-95	12.60	12.75	—	3.958	3.833

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

NO. 201

EXTERNAL UPSET & INTEGRAL JOINT TUBING

Threaded & Coupled		Integral Joint Box O.D. In.	** Collapse Resist. psi	** Internal Yield Pressure psi	Joint Yield Strength, Lb.***			
O.D. of Cplg., In.					Threaded & Coupled		Integral Joint	
Non- Upset	Upset				Non- Upset	Upset		
4.750	—	—	—	6,350	7,420	135,010	—	—
—	—	—	4.625	11,350	10,830	—	—	285,000
—	5.000	4.250	4.405	8,410	8,600	—	230,760	231,000
—	—	—	—	7,080	8,900	162,000	—	—
—	—	—	—	9,590	10,320	—	276,900	—
4.750	—	—	—	2,630	2,470	45,000	—	—
—	5.000	4.250	—	3,220	2,870	—	76,920	—
4.750	—	—	—	4,060	3,960	72,000	—	—
—	5.000	4.250	—	4,900	4,590	—	123,070	—
4.750	—	—	—	5,110	5,440	99,010	—	—
—	5.000	4.250	4.405	6,590	6,300	—	169,220	169,000
—	—	—	4.000	7,300	6,880	—	—	137,000
—	—	—	—	6,590	7,910	144,000	—	—
—	—	—	—	8,800	9,170	—	246,100	—
4.750	—	—	—	6,590	7,910	144,010	—	—
—	5.000	4.250	4.405	8,800	9,170	—	246,140	246,000
—	—	—	4.625	12,110	11,550	—	—	304,000
—	—	—	4.405	10,700	12,040	—	—	323,000
—	—	—	4.625	15,900	15,160	—	—	400,000
—	—	—	—	9,7310	9,390	171,000	—	—
—	—	—	—	9,980	10,90	—	292,300	—
5.200	5.563	4.750	4.910	7,200	7,900	195,680	270,030	270,000
—	—	—	4.935	8,170	8,460	—	—	288,000
—	—	—	5.125	10,390	9,830	—	—	331,000
—	—	—	5.312	12,960	12,540	—	—	412,000
—	—	—	—	8,120	9,490	234,800	324,000	—
5.200	5.563	4.750	—	2,870	2,630	65,230	90,010	—
5.200	5.563	4.750	—	4,500	4,220	104,360	144,020	—
5.200	5.563	4.750	4.910	5,720	5,800	143,500	198,030	198,000
—	—	—	4.935	6,420	6,200	—	—	211,000
—	—	—	—	7,500	8,430	208,700	288,000	—
5.200	5.563	4.750	4.910	7,500	8,430	208,730	288,040	288,000
—	—	—	4.935	8,540	9,020	—	—	307,000
—	—	—	5.125	11,090	10,480	—	—	353,000
—	—	—	5.312	13,820	13,380	—	—	439,000
—	—	—	4.910	8,950	11,070	—	—	378,000
—	—	—	4.935	10,350	11,840	—	—	403,000
—	—	—	5.125	13,820	13,760	—	—	463,000
—	—	—	5.312	18,140	17,560	—	—	567,000
—	—	—	—	8,410	10,010	247,900	342,000	—

** Collapse, Internal Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

TABLE

DIMENSIONS AND STRENGTHS OF API

Size O.D. In.	Wt. Per Ft. W/Cplg. Lb.	I.D. In.	I.D. At. Full Upset In.	Collapse Pressure**			
				D PSI	E PSI	G PSI *	S-135 PSI *
2 ³ / ₈	4.85	1.995	1.437	*6,850	11,040	13,250	16,560
2 ³ / ₈	6.65	1.815	1.125	11,440	15,600	18,720	23,400
2 ⁷ / ₈	6.85	2.441	1.875	—	10,470	12,560	15,700
2 ⁷ / ₈	10.40	2.151	1.187	12,110	16,510	19,810	24,760
3 ¹ / ₂	9.50	2.992	2.250	—	10,040	12,110	15,140
3 ¹ / ₂	13.30	2.764	1.875	10,350	14,110	16,940	21,170
3 ¹ / ₂	15.50	2.602	1.750	12,300	16,770	20,130	25,160
4	11.85	3.476	2.937	—	8,410	10,310	12,820
4	14.00	3.340	2.375	8,330	11,350	14,630	17,030
4 ¹ / ₂	13.75	3.958	3.156	—	7,200	8,920	10,910
4 ¹ / ₂	16.60	3.826	2.812	7,620	10,390	12,470	15,590
4 ¹ / ₂	20.00	3.640	2.812	9,510	12,960	15,560	19,450
5	16.25	4.408	3.750	—	6,970	8,640	10,550
5	19.50	4.276	3.687	7,390	10,000	12,090	15,110
5 ¹ / ₂	21.90	4.778	3.812	6,610	8,440	10,350	12,870
5 ¹ / ₂	24.70	4.670	3.500	7,670	10,460	12,560	15,700
5 ⁹ / ₁₆	*19.00	4.975	4.125	4,580	5,640	—	—
5 ⁹ / ₁₆	*22.20	4.859	3.812	5,480	6,740	—	—
5 ⁹ / ₁₆	*25.25	4.733	3.500	6,730	8,290	—	—
6 ⁵ / ₈	*22.20	6.065	5.187	3,260	4,020	—	—
6 ⁵ / ₈	25.20	5.965	5.000	4,010	4,810	6,160	6,430
6 ⁵ / ₈	*31.90	5.761	4.625	5,020	6,170	—	—

*Non API Standard. Shown for information only.

**Collapse, Internal Yield and Tensile Strength are minimum values with no safety factor.

NO. 202

SEAMLESS INTERNAL UPSET DRILL PIPE

Internal Yield Pressure**				Tensile Strength**				Size O.D. In.
D PSI	E PSI	G PSI *	S-135 PSI *	D 1000 Lb.	E 1000 Lb.	G 1000 Lb. *	S-135 1000 Lb. *	
*7,110	10,500	14,700	18,900	70	98	137	176	2 ³ / ₈
11,350	15,470	21,660	27,850	101	138	194	249	2 ⁷ / ₈
—	9,910	13,870	17,830	—	136	190	245	2 ⁷ / ₈
12,120	16,530	23,140	29,750	157	214	300	386	2 ⁷ / ₈
—	9,520	13,340	17,140	—	194	272	350	3 ¹ / ₂
10,120	13,800	19,320	24,840	199	272	380	489	3 ¹ / ₂
12,350	16840	23,570	30,310	237	323	452	581	3 ¹ / ₂
—	8,600	12,040	15,470	—	231	323	415	4
7,940	10,830	15,160	19,500	209	285	400	514	4
—	7,900	11,070	14,230	—	270	378	486	4 ¹ / ₂
7,210	9,830	13,760	17,690	242	331	463	595	4 ¹ / ₂
9,200	12,540	17,560	22,580	302	412	577	742	4 ¹ / ₂
—	7,770	10,880	13,980	—	328	459	591	5
6,970	9,500	13,300	17,100	290	396	554	712	5
6,320	8,610	12,060	15,500	321	437	612	787	5 ¹ / ₂
7,260	9,900	13,860	17,820	365	497	696	895	5 ¹ / ₂
5,090	6,950	—	—	267	365	—	—	5 ⁹ / ₁₆
6,090	8,300	—	—	317	432	—	—	5 ⁹ / ₁₆
7,180	9,790	—	—	369	503	—	—	5 ⁹ / ₁₆
4,160	5,530	—	—	307	418	—	—	6 ⁵ / ₈
4,790	6,540	9,150	11,770	359	489	685	881	6 ⁵ / ₈
6,275	8,540	—	—	463	631	—	—	6 ⁵ / ₈

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
4 1/2	C-75	11.60	4.000	3.875	5.000	—	—	6,130
	C-75	13.50	3.920	3.795	5.000	—	—	8,170
	C-90	11.60	4.000	3.875	—	—	—	6,810
	C-90	13.50	3.920	3.795	—	—	—	9,300
	C-95	11.60	4.000	3.875	5.000	—	—	7,010
	C-95	13.50	3.920	3.795	5.000	—	—	9,650
	F-25*	9.50	4.090	3.965	5.000	—	—	1,920
	H-40	9.50	4.090	3.965	5.000	—	—	2,770
	HCL-80+	11.60	4.000	3.875	—	—	—	8,650
	HCL-80+	13.50	3.920	3.795	—	—	—	10,380
	HCL-80+	15.10	3.826	3.701	—	—	—	12,330
	HCN-80+	11.60	4.000	3.875	—	—	—	8,650
	HCN-80+	13.50	3.920	3.795	—	—	—	10,380
	HCP-110+	11.60	4.000	3.875	—	—	—	8,650
	J-55	9.50	4.090	3.965	5.000	—	—	3,310
	J-55	10.50	4.052	3.927	5.000	—	—	4,010
	J-55	11.60	4.000	3.875	5.000	—	—	4,960
	K-55	9.50	4.090	3.965	5.000	—	—	3,310
	K-55	10.50	4.052	3.927	5.000	—	—	4,010
	K-55	11.60	4.000	3.875	5.000	—	—	4,960
	L-80	11.60	4.000	3.875	—	—	—	6,350
	L-80	13.50	3.920	3.795	—	—	—	8,540
	L-80	15.10	3.826	3.701	—	—	—	11,090
	LS-140+	15.10	3.826	3.701	—	—	—	17,240
	LS-65+	9.50	4.090	3.965	—	—	—	3,600
	LS-65	10.50	4.052	3.927	—	—	—	4,420
	LS-65+	11.60	4.000	3.875	—	—	—	5,560
	LS-65	13.50	3.920	3.795	—	—	—	7,300
	N-80	11.60	4.000	3.875	5.000	—	—	6,350
	N-80	13.50	3.920	3.795	5.000	—	—	8,540
	P110	11.60	4.000	3.875	5.000	—	—	7,560
	P-110	13.50	3.920	3.795	5.000	—	—	10,670
	P-110	15.10	3.826	3.701	5.000	—	—	14,320
Q-125+	15.10	3.826	3.701	—	—	—	15,840	
S-95	11.60	4.000	3.875	—	—	—	8,650	
S-95	13.50	3.920	3.795	—	—	—	10,380	
S-95	15.10	3.826	3.701	—	—	—	12,330	
T-95	11.60	4.000	3.875	—	—	—	7,030	
T-95	13.50	3.920	3.795	—	—	—	9,660	
V-150*	15.10	3.826	3.701	5.000	—	—	18,110	
5	C-75	15.00	4.408	4.283	5.563	4.151	5.360	6,970
	C-75	18.00	4.276	4.151	5.563	4.151	5.360	10,000
	C-75*	20.30	4.184	—	—	4.059	5.094	11,240
	C-75*	23.20	4.044	—	—	3.919	5.094‡	12,970
	C-90	15.00	4.408	4.233	—	—	—	7,840
	C-90	18.00	4.276	4.151	—	—	—	11,530
	C-90	21.40	4.126	4.001	—	—	—	14,360
	C-90	23.20	4.044	3.919	—	—	—	15,560
	C-90	24.10	4.000	3.875	—	—	—	16,200
	C-95	15.00	4.408	4.283	5.563	4.151	5.360	8,090
	C-95	18.00	4.276	4.151	5.563	4.151	5.360	12,010
	C-95*	20.30	4.184	—	—	4.059	5.250	14,250
	C-95*	23.20	4.044	—	—	3.919	5.094‡	16,430

*Non-API Standard. Shown for information only.

‡Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
7,290	—	7,290	7,290	250	—	212	288	—
8,460	—	8,460	8,460	288	—	257	331	—
8,750	—	8,750	8,750	300	—	223	309	—
10,150	—	10,150	10,150	345	—	270	355	—
9,240	—	9,240	9,240	317	—	234	325	—
10,710	—	10,710	10,710	364	—	284	374	—
—	1,990	—	—	69	71	—	—	—
3,190	3,190	—	—	111	77	—	—	—
7,780	—	7,780	7,780	267	—	223	312	—
9,020	—	9,020	9,020	307	—	270	359	—
10,480	—	10,480	9,790	353	—	325	408	—
7,780	—	7,780	7,780	267	—	223	312	—
9,020	—	9,020	9,020	307	—	270	359	—
10,690	—	10,690	10,690	367	—	279	385	—
4,380	4,380	—	—	152	101	—	—	—
4,790	4,790	—	4,790	165	132	—	203	—
5,350	5,350	5,350	5,350	184	154	162	225	—
4,380	4,380	—	—	152	112	—	—	—
4,790	4,790	—	4,790	165	146	—	249	—
5,350	5,350	5,350	5,350	184	170	180	277	—
7,780	—	7,780	7,780	267	—	212	291	—
9,020	—	9,020	9,020	307	—	257	334	—
10,480	—	10,480	10,480	353	—	308	384	—
18,350	—	18,350	17,140	617	—	487	616	—
5,180	5,180	—	—	180	135	—	—	—
5,660	5,660	—	5,660	195	154	—	231	—
6,320	6,320	6,320	6,320	217	179	188	256	—
7,330	—	7,330	7,330	249	—	228	295	—
7,780	—	7,780	7,780	267	—	223	304	—
9,020	—	9,020	9,020	307	—	270	349	—
10,690	—	10,690	10,690	367	—	279	385	—
12,410	—	12,410	12,410	422	—	338	443	—
14,420	—	14,420	13,460	485	—	406	509	—
16,380	—	16,380	15,300	551	—	438	554	—
9,240	—	9,240	9,240	317	—	245	338	—
10,710	—	10,710	10,710	364	—	297	388	—
12,450	—	12,450	11,630	419	—	357	446	—
9,240	—	9,240	9,240	317	—	234	325	—
10,710	—	10,710	10,710	364	—	284	374	—
—	—	19,660	18,360	661	—	519	683	—
7,770	7,770	7,770	—	328	—	295	375	416
9,500	9,500	9,290	—	396	—	376	452	446
10,710	—	—	—	—	369†	—	—	529‡
12,550	—	—	—	—	369†	—	—	529‡
9,320	—	9,320	9,320	394	—	311	404	—
11,400	—	11,400	11,150	475	—	396	484	—
13,770	—	12,170	11,150	564	—	490	537	—
15,060	—	12,170	11,150	611	—	540	537	—
15,750	—	12,170	11,150	636	—	567	537	—
9,840	—	9,840	9,840	416	—	326	424	459
12,040	—	12,040	11,770	501	—	416	512	493
13,560	—	—	—	—	—	—	—	584‡
15,890	—	—	—	—	—	—	—	584‡

† Hydriil TS

‡ Hydriil Super FJ-P

‡ Hydriil FJ-P

‡ Hydriil Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
5	C-95+	21.40	4.126	4.001	—	—	—	15,160
	C-95+	24.10	4.000	3.875	—	—	—	17,100
	F-25*	11.50	4.560	4.435	5.563	—	—	1,820
	HCL-80+	15.00	4.408	4.283	—	—	—	9,380
	HCL-80+	18.00	4.276	4.151	—	—	—	11,880
	HCL-80+	23.20	4.044	3.919	—	—	—	15,820
	HCN-80+	15.00	4.408	4.283	—	—	—	9,380
	HCN-80+	18.00	4.276	4.151	—	—	—	11,880
	HCN-80+	23.20	4.044	3.919	—	—	—	15,820
	J-55	11.50	4.560	4.435	5.563	—	—	3,060
	J-55	13.00	4.494	4.369	5.563	—	—	4,140
	J-55	15.00	4.408	4.283	5.563	4.151	5.360	5,560
	K-55	11.50	4.560	4.435	5.563	—	—	3,060
	K-55	13.00	4.494	4.369	5.563	—	—	4,140
	K-55	15.00	4.408	4.283	5.563	4.151	5.360	5,550
	L-80	15.00	4.408	4.283	—	—	—	7,250
	L-80	24.10	4.000	3.875	—	—	—	14,400
	L-80+	18.00	4.276	4.151	—	—	—	10,500
	L-80+	21.40	4.126	4.001	—	—	—	12,760
	L-80+	23.20	4.044	3.919	—	—	—	13,830
	LS-140+	18.00	4.276	4.151	—	—	—	16,080
	LS-65	11.50	4.560	4.435	—	—	—	3,290
	LS-65+	13.00	4.494	4.369	—	—	—	4,590
	LS-65+	15.00	4.408	4.283	—	—	—	6,280
	LS-65+	18.00	4.276	4.151	—	—	—	8,730
	N-80	15.00	4.408	4.283	5.563	4.151	5.360	7,250
	N-80	18.00	4.276	4.151	5.563	4.151	5.360	10,490
	N-80*	20.30	4.184	—	—	4.059	5.250	11,990
	N-80*	23.20	4.044	—	—	3.919	5.094‡	13,830
	N-80*+	21.40	4.126	4.001	—	—	—	12,760
	N-80+	24.10	4.000	3.875	—	—	—	14,400
	P-110	15.00	4.408	4.283	5.563	4.151	5.360	8,830
	P-110	18.00	4.276	4.151	5.563	4.151	5.360	13,450
	P-110	20.30	4.184	—	—	4.059	5.094‡	16,490
	P-110*	23.20	4.044	—	—	3.919	5.094‡	19,020
	P-110*+	21.40	4.126	4.001	—	—	—	17,550
	P-110+	24.10	4.000	3.875	—	—	—	19,800
	Q-125+	18.00	4.276	4.151	—	—	—	14,830
	Q-125+	21.40	4.126	4.001	—	—	—	19,940
	Q-125+	23.20	4.044	3.919	—	—	—	21,620
	Q-125+	24.10	4.000	3.875	—	—	—	22,500
	S-95+	15.00	4.408	4.283	—	—	—	9,380
	S-95+	18.00	4.276	4.151	—	—	—	12,030
	S-95+	23.20	4.044	3.919	—	—	—	16,430
	T-95	15.00	4.408	4.283	—	—	—	8,110
	T-95	18.00	4.276	4.151	—	—	—	12,030
	T-95	21.40	4.126	4.001	—	—	—	15,160
T-95	23.20	4.044	3.919	—	—	—	16,430	
T-95	24.10	4.000	3.875	—	—	—	17,100	
V-150	24.10	4.000	3.875	—	—	—	27,000	
V-150*	15.00	4.408	4.283	5.563	—	—	10,260	
V-150*	18.00	4.276	4.151	5.563	—	—	16,860	
V-150*	20.80	4.156	4.031	5.563	—	—	22,860	
V-150*	24.20	4.000	3.875	5.563	—	—	27,000	

*Non API Standard. Shown for information only.

‡Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
14,530	—	12,840	11,770	595	—	515	563	—
16,630	—	12,840	11,770	672	—	595	563	—
—	1,930	—	—	83	84	—	—	—
8,290	—	8,290	8,290	—	—	311	408	—
10,140	—	10,140	9,910	422	—	396	492	—
13,380	—	10,810	9,910	543	—	540	516	—
8,290	—	8,290	8,290	350	—	311	408	—
10,140	—	10,140	9,910	422	—	396	492	—
13,380	—	10,810	9,910	543	—	540	537	—
4,240	4,240	—	—	182	133	—	—	—
4,870	4,870	4,870	4,870	208	169	182	252	—
5,700	5,700	5,700	5,700	241	207	223	293	328
4,240	4,240	—	—	182	147	—	—	—
4,870	4,870	4,870	4,870	208	186	201	309	—
5,700	5,700	5,700	5,700	241	228	246	359	416
8,290	—	8,290	8,290	350	—	295	379	—
14,000	—	10,810	9,910	566	—	538	510	—
10,140	—	10,140	9,910	422	—	377	457	—
12,240	—	10,810	9,910	501	—	466	510	—
13,380	—	10,810	9,910	543	—	513	510	—
17,740	—	17,740	17,340	738	—	594	735	—
5,010	5,010	—	—	215	162	—	—	—
5,760	5,760	5,760	5,760	245	196	212	288	—
6,730	6,730	6,730	6,730	284	240	259	334	—
8,240	—	8,240	8,240	343	—	331	403	—
8,290	—	8,290	8,290	350	—	311	396	437
10,140	—	10,140	9,910	422	—	396	477	469
11,420	—	—	—	—	388†	284††	363‡	556‡‡
13,380	—	—	—	—	388†	284††	363‡	556‡‡
12,240	—	10,810	9,910	501	—	490	537	—
14,000	—	10,810	9,910	566	—	558	537	—
11,400	—	11,400	11,400	481	—	388	503	547
13,940	—	13,940	13,620	580	—	495	606	587
15,710	—	—	—	—	485†	354††	454‡	696‡‡
18,400	—	—	—	—	485†	354††	454‡	696‡‡
16,820	—	14,870	13,620	689	—	613	671	—
19,250	—	14,870	13,620	778	—	708	671	—
15,840	—	15,840	15,480	659	—	535	661	—
19,120	—	16,900	15,480	783	—	662	724	—
20,910	—	16,900	15,480	849	—	729	724	—
21,880	—	16,900	15,480	884	—	765	724	—
9,840	—	9,840	9,840	416	—	342	441	—
12,040	—	12,040	11,770	501	—	436	532	—
15,890	—	12,840	11,770	645	—	594	590	—
9,840	—	9,840	9,840	416	—	326	424	—
12,040	—	12,040	11,770	501	—	416	512	—
14,530	—	12,840	11,770	595	—	515	563	—
15,890	—	12,840	11,770	645	—	567	563	—
16,630	—	12,840	11,770	672	—	595	563	—
26,250	—	20,280	18,580	1,060	—	907	858	—
—	—	15,540	15,540	656	—	497	685	—
—	—	19,000	18,580	791	—	634	826	—
—	—	20,280	18,580	910	—	755	847	—
—	—	20,280	18,580	1,060	—	905	847	—

† HydriL TS

‡ HydriL Super FJ-P

†† HydriL FJ-P

‡‡ HydriL Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
5 1/2	C-75	17.00	4.892	4.767	6.050	4.653	5.860	6,070
	C-75	20.00	4.778	4.653	6.050	4.653	5.860	8,440
	C-75	23.00	4.670	4.545	6.050	4.545	5.860	10,460
	C-75*	26.00	4.548	—	—	4.423	5.656	11,860
	C-90	17.00	4.892	4.767	—	—	—	6,740
	C-90	20.00	4.778	4.653	—	—	—	9,630
	C-90	23.00	4.670	4.545	—	—	—	12,380
	C-90	26.00	4.548	4.423	—	—	—	14,240
	C-90	26.80	4.500	4.375	—	—	—	14,880
	C-90	29.70	4.376	4.251	—	—	—	16,510
	C-90	32.60	4.250	4.125	—	—	—	18,130
	C-90	35.30	4.126	4.001	—	—	—	19,680
	C-90	38.00	4.000	3.875	—	—	—	21,200
	C-90	40.50	3.876	3.751	—	—	—	22,650
	C-90	43.10	3.750	3.625	—	—	—	24,080
	C-95	17.00	4.892	4.767	6.050	4.653	5.860	6,930
	C-95	20.00	4.778	4.653	6.050	4.653	5.860	10,000
	C-95	20.00	4.778	4.653	—	—	—	10,010
	C-95	23.00	4.670	4.545	6.050	4.545	5.860	12,920
	C-95*	26.00	4.548	—	—	4.423	5.656†	15,020
	F-25*	13.00	5.044	4.919	6.050	—	—	1,660
	H-40	14.00	5.012	4.887	6.050	—	—	2,630
	HCL-80+	17.00	4.892	4.767	—	—	—	8,580
	HCL-80+	20.00	4.778	4.653	—	—	—	10,630
	HCL-80+	23.00	4.670	4.545	—	—	—	12,450
	HCN-80+	17.00	4.892	4.767	—	—	—	8,580
	HCN-80+	20.00	4.778	4.653	—	—	—	10,630
	HCN-80+	23.00	4.670	4.545	—	—	—	12,450
	HCP-Ilo+	17.00	4.892	4.767	—	—	—	8,580
	HCQ-125+	17.00	4.892	4.767	—	—	—	8,580
	J-55	14.00	5.012	4.887	6.050	—	—	3,120
	J-55	15.50	4.950	4.825	6.050	4.653	5.860	4,040
	J-55	17.00	4.892	4.767	6.050	4.653	5.860	4,910
	K-55	14.00	5.012	4.887	6.050	—	—	3,120
	K-55	15.50	4.950	4.825	6.050	4.653	5.860	4,040
	K-55	17.00	4.892	4.767	6.050	4.653	5.860	4,910
	L-80+	17.00	4.892	4.767	—	—	—	6,290
	L-80+	20.00	4.778	4.653	—	—	—	8,830
	L-80+	23.00	4.670	4.545	—	—	—	11,160
	LS-140+	17.00	4.892	4.767	—	—	—	8,580
	LS-140+	20.00	4.778	4.653	—	—	—	12,950
	LS-140+	23.00	4.670	4.545	—	—	—	17,500
	LS-65+	14.00	5.012	4.887	—	—	—	3,360
	LS-65+	15.50	4.950	4.825	—	—	—	4,470
	LS-65+	17.00	4.892	4.767	—	—	—	5,510
	LS-65+	20.00	4.778	4.653	—	—	—	7,540
	N-80	17.00	4.892	4.767	6.050	4.653	5.860	6,280
	N-80	20.00	4.778	4.653	6.050	4.653	5.860	8,830
	N-80	23.00	4.670	4.545	6.050	4.545	5.860	11,160
	N-80*	26.00	4.548	—	—	4.423	5.656†	12,650
N-80*+	20.00	4.778	4.653	—	—	—	8,830	
P-110	17.00	4.892	4.767	6.050	4.653	5.860	7,460	
P-110	20.00	4.778	4.653	6.050	4.653	5.860	11,080	
P-110	23.00	4.670	4.545	6.050	4.545	5.860	14,520	

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†Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
7,250	—	7,250	7,250	372	—	327	423	471
8,610	—	8,610	8,430	437	—	403	497	497
9,900	—	9,260	8,430	497	—	473	550	549
11,360	—	—	—	—	432†	—	—	678‡
8,710	—	8,710	8,710	447	—	356	456	—
10,340	—	10,340	10,120	525	—	438	436	—
11,880	—	11,110	10,120	597	—	514	579	—
13,630	—	11,110	10,120	676	—	598	579	—
14,320	—	—	—	707	—	—	—	—
16,090	—	—	—	785	—	—	—	—
17,900	—	—	—	861	—	—	—	—
19,670	—	—	—	935	—	—	—	—
21,480	—	—	—	1,007	—	—	—	—
23,250	—	—	—	1,076	—	—	—	—
25,060	—	—	—	1,144	—	—	—	—
9,190	—	9,190	9,190	471	—	374	480	521
10,910	—	10,910	10,680	554	—	460	563	549
10,910	—	10,910	10,680	554	—	460	563	—
12,540	—	11,730	10,680	630	—	540	608	606
14,390	—	—	—	—	—	—	—	749‡
—	1,810	—	—	94	95	—	—	—
3,110	3,110	—	—	161	130	—	—	—
7,740	—	7,740	7,740	397	—	356	462	—
9,190	—	9,190	8,990	466	—	438	542	—
10,560	—	9,880	8,990	530	—	514	551	—
7,740	—	7,740	7,740	397	—	356	462	—
9,190	—	9,190	8,990	466	—	438	542	—
10,560	—	9,880	8,990	530	—	514	579	—
10,640	—	10,640	10,640	546	—	445	568	—
12,090	—	12,090	12,090	620	—	481	620	—
4,270	4,270	—	—	222	172	—	—	—
4,810	4,810	4,810	4,810	248	202	217	300	339
5,320	5,320	5,320	5,320	273	229	247	329	372
4,270	4,270	—	—	222	189	—	—	—
4,810	4,810	4,810	4,810	248	222	239	366	429
5,320	5,320	5,320	5,320	273	252	272	402	471
7,740	—	7,740	7,740	397	—	338	428	—
9,190	—	9,190	8,990	466	—	416	503	—
10,560	—	9,880	8,990	530	—	489	550	—
13,540	—	13,540	13,540	695	—	534	690	—
16,080	—	16,080	15,740	816	—	657	810	—
18,490	—	17,290	15,740	928	—	771	869	—
5,050	5,050	—	—	262	200	—	—	—
5,690	5,690	5,690	5,690	293	235	253	342	—
6,290	6,290	6,290	6,290	323	267	287	376	—
7,470	—	7,470	7,470	379	—	353	442	—
7,740	—	7,740	7,740	397	—	348	446	496
9,190	—	9,190	8,990	466	—	428	524	523
10,560	—	9,880	8,990	530	—	502	579	577
12,120	—	—	—	—	455†	315††	451‡	713‡
9,190	—	9,190	8,990	466	—	428	524	—
10,640	—	10,640	10,640	546	—	445	568	620
12,640	—	12,640	12,360	641	—	548	667	654
14,520	—	13,580	12,360	729	—	643	724	722

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
5½	P-110*	26.00	4.548	—	—	4.423	5.656‡	17,390
	P-110‡	20.00	4.778	4.653	—	—	—	11,100
	Q-125‡	17.00	4.892	4.767	—	—	—	7,890
	Q-125‡	20.00	4.778	4.653	—	—	—	12,080
	Q-125‡	23.00	4.670	4.545	—	—	—	16,070
	Q-125‡	26.00	4.548	4.423	—	—	—	19,770
	S-95	17.00	4.892	4.767	—	—	—	8,580
	S-95‡	20.00	4.778	4.653	—	—	—	10,630
	S-95‡	23.00	4.670	4.545	—	—	—	12,940
	T-95	17.00	4.892	4.767	—	—	—	6,940
	T-95	20.00	4.778	4.653	—	—	—	10,010
	T-95	23.00	4.670	4.545	—	—	—	12,940
	T-95	26.00	4.548	4.423	—	—	—	15,030
	T-95	26.80	4.500	4.375	—	—	—	15,700
	T-95	29.70	4.376	4.251	—	—	—	17,430
	T-95	32.60	4.250	4.125	—	—	—	19,140
	T-95	35.30	4.126	4.001	—	—	—	20,760
	T-95	38.00	4.000	3.875	—	—	—	22,380
	T-95	40.50	3.876	3.751	—	—	—	23,920
	T-95	43.10	3.750	3.625	—	—	—	25,400
V-150	20.00	4.778	4.653	—	—	—	13,460	
V-150*	20.00	4.778	4.653	6.050	—	—	13,480	
V-150*	23.00	4.670	4.545	6.050	—	—	18,390	
V-150*	26.00	4.548	4.423	6.050	—	—	23,720	
5 ⁵ / ₈	H2S-90‡	26.70	4.671	4.544	—	—	—	14,750
	H2S-95‡	26.70	4.671	4.544	—	—	—	14,750
	HCL-80‡	26.70	4.671	4.544	—	—	—	14,750
	L-80‡	26.70	4.671	4.544	—	—	—	12,420
	P-110‡	26.70	4.671	4.544	—	—	—	17,080
5¾	C-95	19.70	5.080	4.955	—	—	—	7,980
	C-95‡	18.10	5.142	5.017	—	—	—	6,380
	C-95‡	21.80	5.000	4.875	—	—	—	10,050
	C-95‡	24.20	4.910	4.785	—	—	—	12,370
	J-55‡	16.50	5.198	5.073	—	—	—	3,720
	J-55‡	18.10	5.142	5.017	—	—	—	4,520
	J-55‡	19.70	5.080	4.955	—	—	—	5,410
	L-80‡	18.10	5.142	5.017	—	—	—	5,700
	L-80‡	19.70	5.080	4.955	—	—	—	7,030
	L-80‡	21.80	5.000	4.875	—	—	—	8,740
	L-80‡	24.20	4.910	4.785	—	—	—	10,650
	N-80‡	18.10	5.142	5.017	—	—	—	5,700
	N-80‡	19.70	5.080	4.955	—	—	—	7,030
	N-80‡	21.80	5.000	4.875	—	—	—	8,740
	N-80‡	24.20	4.910	4.785	—	—	—	10,650
	P-110‡	18.10	5.142	5.017	—	—	—	6,640
	P-110‡	19.70	5.080	4.955	—	—	—	8,530
P-110‡	21.80	5.000	4.875	—	—	—	10,960	
P-110‡	24.20	4.910	4.785	—	—	—	13,700	

*Non-API Standard. Shown for information only.

‡Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
16,660	—	—	—	—	569†	393††	564‡	892‡‡
12,630	—	12,630	12,360	641	—	548	667	—
12,090	—	12,090	12,090	620	—	481	620	—
14,360	—	14,360	14,050	729	—	592	728	—
16,510	—	15,430	14,050	829	—	694	782	—
18,930	—	15,430	14,050	939	—	808	782	—
9,190	—	9,190	9,190	471	—	392	498	—
10,910	—	10,910	10,680	554	—	482	585	—
12,540	—	11,730	10,680	630	—	566	637	—
9,190	—	9,190	9,190	471	—	374	480	—
10,910	—	10,910	10,680	554	—	460	563	—
12,540	—	11,730	10,680	630	—	540	608	—
14,390	—	11,730	10,680	714	—	628	608	—
15,110	—	—	—	746	—	—	—	—
16,990	—	—	—	828	—	—	—	—
18,810	—	—	—	909	—	—	—	—
20,770	—	—	—	987	—	—	—	—
22,670	—	—	—	1,063	—	—	—	—
24,540	—	—	—	1,136	—	—	—	—
26,450	—	—	—	1,208	—	—	—	—
17,230	—	17,230	16,860	874	—	701	865	—
—	—	17,230	16,860	874	—	701	908	—
—	—	18,520	16,860	994	—	823	910	—
—	—	22,720	—	—	—	—	—	722‡
13,360	—	11,110	10,120	694	—	514	579	—
14,100	—	11,730	10,680	733	—	539	608	—
11,870	—	9,880	8,990	617	—	501	550	—
11,870	—	9,880	8,990	617	—	488	550	—
16,320	—	13,580	12,360	849	—	642	724	—
9,690	—	—	9,690	541	—	—	550	—
8,790	—	—	8,790	494	—	—	502	—
10,840	—	—	10,840	602	—	—	611	—
12,140	—	—	12,140	668	—	—	679	—
4,620	—	—	4,620	261	—	—	314	—
5,090	—	—	5,090	286	—	—	344	—
5,610	—	—	5,610	313	—	—	377	—
7,400	—	—	7,400	416	—	—	447	—
8,160	—	—	8,160	456	—	—	490	—
9,130	—	—	9,130	507	—	—	545	—
10,230	—	—	10,230	563	—	—	605	—
7,400	—	—	7,400	416	—	—	466	—
8,160	—	—	8,160	456	—	—	511	—
9,130	—	—	9,130	507	—	—	568	—
10,230	—	—	10,230	563	—	—	630	—
10,180	—	—	10,180	572	—	—	594	—
11,220	—	—	11,220	627	—	—	651	—
12,550	—	—	12,550	697	—	—	723	—
14,060	—	—	14,060	774	—	—	803	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
6	F-25	15.00	5.524	5.399	6.625	—	—	1,540
	H-40	18.00	5.424	5.299	6.625	—	—	2,780
	J-55	18.00	5.424	5.299	6.625	—	—	3,620
	N-80	18.00	5.424	5.299	6.625	—	—	4,740
	N-80	20.00	5.352	5.227	6.625	—	—	5,690
	N-80	23.00	5.240	5.115	6.625	—	—	7,180
	P-110	23.00	5.240	5.115	6.625	—	—	10,380
	P-110	26.00	5.132	5.007	6.625	—	—	12,380
6 ⁵ / ₈	C-75	24.00	5.921	5.796	7.390	5.73	7.000	5,570
	C-75	28.00	5.791	5.666	7.390	5.666	7.000	7,830
	C-75	32.00	5.675	5.550	7.390	5.55	7.000	9,830
	C-90	24.00	5.921	5.796	—	—	—	6,140
	C-90	28.00	5.791	5.666	—	—	—	8,880
	C-90	32.00	5.675	5.550	—	—	—	11,330
	C-95	24.00	5.921	5.796	7.390	5.73	7.000	6,290
	C-95	28.00	5.791	5.666	7.390	5.666	7.000	9,200
	C-95	32.00	5.675	5.550	7.390	5.55	7.000	11,800
	F-25*	17.00	6.135	6.010	7.390	—	—	1,370
	H-40	20.00	6.049	5.924	7.390	—	—	2,520
	J-55	20.00	6.049	5.924	7.390	—	—	2,970
	J-55	24.00	5.921	5.796	7.390	5.73	7.000	4,560
	K-55	20.00	6.049	5.924	7.390	—	—	2,970
	K-55	24.00	5.921	5.796	7.390	5.73	7.000	4,560
	L-80*	24.00	5.921	5.796	—	—	—	5,760
	L-80*	28.00	5.791	5.666	—	—	—	8,170
	L-80*	32.00	5.675	5.550	—	—	—	10,320
	LS-65	24.00	5.921	5.796	—	—	—	5,080
	LS-65	28.00	5.791	5.666	—	—	—	7,010
	LS-65+	20.00	6.049	5.924	—	—	—	3,190
	N-80	24.00	5.921	5.796	7.390	5.73	7.000	5,760
	N-80	28.00	5.791	5.666	7.390	5.666	7.000	8,170
	N-80	32.00	5.675	5.550	7.390	5.55	7.000	10,320
	P-110	24.00	5.921	5.796	7.390	5.73	7.000	6,710
	P-110	28.00	5.791	5.666	7.390	5.666	7.000	10,140
P-110	32.00	5.675	5.550	7.390	5.55	7.000	13,200	
Q-125+	32.00	5.675	5.550	—	—	—	14,530	
7	C-75	23.00	6.366	6.241	7.656	6.151	7.390	3,770
	C-75	26.00	6.276	6.151	7.656	6.151	7.390	5,250
	C-75	29.00	6.184	6.059	7.656	6.059	7.390	6,760
	C-75	32.00	6.094	5.969	7.656	5.969	7.390	8,230
	C-75	35.00	6.004	5.879	7.656	5.879	7.530	9,710
	C-75	38.00	5.920	5.795	7.656	5.795	7.530	10,680
	C-90	23.00	6.366	6.241	—	—	—	4,030
	C-90	26.00	6.276	6.151	—	—	—	5,740
	C-90	29.00	6.184	6.059	—	—	—	7,580
	C-90	32.00	6.094	5.969	—	—	—	9,380
	C-90	35.00	6.004	5.879	—	—	—	11,170
	C-90	38.00	5.920	5.795	—	—	—	12,820
	C-90	41.00	5.820	5.695	—	—	—	13,900
	C-90	42.70	5.750	5.625	—	—	—	14,640
	C-90	46.40	5.626	5.500	—	—	—	15,930
	C-90	50.10	5.500	5.375	—	—	—	17,220

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+ Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
—	1,740	—	—	107	108	—	—	—
—	3,360	—	—	206	179	—	—	—
—	4,620	—	—	283	239	279	—	—
—	—	6,720	—	412	—	323	—	—
—	—	7,560	—	461	—	366	—	—
—	—	8,870	—	536	—	432	—	—
—	—	12,190	—	737	—	565	—	—
—	—	13,920	—	833	—	646	—	—
6,970	—	6,970	6,970	520	—	453	583	605
8,260	—	8,260	8,260	610	—	552	683	648
9,410	—	9,410	9,200	688	—	638	771	717
8,370	—	8,370	8,370	624	—	520	633	—
9,910	—	9,910	9,910	732	—	633	742	—
11,290	—	11,290	11,050	826	—	732	837	—
8,830	—	8,830	8,830	659	—	546	665	668
10,460	—	10,460	10,460	773	—	665	780	716
11,920	—	11,920	11,660	872	—	769	880	793
—	1,620	—	—	123	121	—	—	—
3,040	3,040	—	—	229	184	—	—	—
4,180	4,180	4,180	4,180	315	245	266	374	—
5,110	5,110	5,110	5,110	382	314	340	453	477
4,180	4,180	4,180	4,180	315	267	290	453	—
5,110	5,110	5,110	5,110	382	342	372	548	605
7,440	—	7,440	7,440	555	—	473	592	—
8,810	—	8,810	8,810	651	—	576	693	—
10,040	—	10,040	9,820	734	—	666	783	—
6,040	6,040	6,040	6,040	451	366	397	518	—
7,160	—	7,160	7,160	529	—	483	607	—
4,940	4,940	4,940	4,940	373	285	309	428	—
7,440	—	7,440	7,440	555	—	481	615	637
8,810	—	8,810	8,810	651	—	586	721	682
10,040	—	10,040	9,820	734	—	677	814	755
10,230	—	10,230	10,230	763	—	641	786	796
12,120	—	12,120	12,120	895	—	781	922	852
13,800	—	13,800	13,500	1,009	—	904	1,040	944
15,680	—	15,680	15,340	1,147	—	989	1,138	—
5,940	—	5,940	5,940	499	—	416	557	632
6,790	—	6,790	6,790	566	—	489	631	641
7,650	—	7,650	7,650	634	—	562	707	685
8,490	—	8,490	7,930	699	—	633	779	761
9,340	—	8,660	7,930	763	—	703	833	850
10,120	—	8,660	7,930	822	—	767	833	917
7,130	—	7,130	7,130	599	—	479	605	—
8,140	—	8,140	8,140	679	—	563	687	—
9,180	—	9,180	9,180	760	—	648	768	—
10,190	—	10,190	9,520	839	—	729	847	—
11,210	—	10,390	9,520	915	—	809	876	—
12,150	—	10,390	9,520	986	—	883	876	—
13,280	—	10,390	9,520	—	1,069	—	903	876
14,060	—	—	—	1,127	—	—	—	—
15,460	—	—	—	1,226	—	—	—	—
16,880	—	—	—	1,325	—	—	—	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
7	C-90	53.60	5.376	5.251	—	—	—	18,460
	C-90	57.10	5.250	5.125	—	—	—	19,690
	C-95	23.00	6.366	6.241	7.656	6.151	7.390	4,150
	C-95	26.00	6.276	6.151	7.656	6.151	7.390	5,870
	C-95	29.00	6.184	6.059	7.656	6.059	7.390	7,820
	C-95	32.00	6.094	5.969	7.656	5.969	7.390	9,730
	C-95	35.00	6.004	5.879	7.656	5.879	7.530	11,640
	C-95	38.00	5.920	5.795	7.656	5.795	7.530	13,420
	F-25*	17.00	6.538	6.413	7.656	—	—	1,100
	H2S-90	23.00	6.366	6.241	—	—	—	5,650
	H2S-90	23.00	6.366	6.241	—	—	—	5,650
	H2S-90+	26.00	6.276	6.151	—	—	—	7,300
	H2S-90+	29.00	6.184	6.059	—	—	—	9,200
	H2S-90+	32.00	6.094	5.969	—	—	—	10,400
	H2S-90+	35.00	6.004	5.879	—	—	—	11,600
	H2S-90+	38.00	5.920	5.795	—	—	—	12,820
	H2S-90*+	41.00	5.820	5.695	—	—	—	13,900
	H2S-95	26.00	6.276	6.151	—	—	—	7,800
	H2S-95+	29.00	6.184	6.059	—	—	—	9,200
	H2S-95+	32.00	6.094	5.969	—	—	—	10,400
	H2S-95+	35.00	6.004	5.879	—	—	—	11,650
	H2S-95+	38.00	5.920	5.795	—	—	—	13,440
	H2S-95*+	41.00	5.820	5.695	—	—	—	14,670
	H-40	17.00	6.538	6.413	7.656	—	—	1,450
	H-40	20.00	6.456	6.331	7.656	—	—	1,980
	HCL-80+	23.00	6.366	6.241	—	—	—	5,650
	HCL-80+	26.00	6.276	6.151	—	—	—	7,800
	HCL-80+	29.00	6.184	6.059	—	—	—	9,200
	HCL-80+	32.00	6.094	5.969	—	—	—	10,400
	HCL-80+	35.00	6.004	5.879	—	—	—	11,600
	HCL-80+	38.00	5.920	5.795	—	—	—	12,700
	HCN-80+	23.00	6.366	6.241	—	—	—	5,650
	HCN-80+	26.00	6.276	6.151	—	—	—	7,800
	HCN-80+	29.00	6.184	6.059	—	—	—	9,200
	HCN-80+	32.00	6.094	5.969	—	—	—	10,400
	HCN-80+	35.00	6.004	5.879	—	—	—	11,600
	HCN-80+	38.00	5.920	5.795	—	—	—	12,700
	HCP-110+	26.00	6.276	6.151	—	—	—	7,800
	HCP-110+	29.00	6.184	6.059	—	—	—	9,200
	HCQ-125+	29.00	6.184	6.059	—	—	—	9,200
	J-55	20.00	6.456	6.331	7.656	—	—	2,270
	J-55	23.00	6.366	6.241	7.656	6.151	7.390	3,270
	J-55	26.00	6.276	6.151	7.656	6.151	7.390	4,320
	K-55	20.00	6.456	6.331	7.656	—	—	2,270
	K-55	23.00	6.366	6.241	7.656	6.151	7.390	3,270
	K-55	26.00	6.276	6.151	7.656	6.151	7.390	4,320
	L-80	29.00	6.184	6.059	—	—	—	7,020
L-80	35.00	6.004	5.879	—	—	—	10,180	
L-80	38.00	5.920	5.795	—	—	—	11,390	
L-80+	23.00	6.366	6.241	—	—	—	3,830	
L-80+	26.00	6.276	6.151	—	—	—	5,410	
L-80+	32.00	6.094	5.969	—	—	—	8,610	
LS-140+	32.00	6.094	5.969	—	—	—	12,540	
LS-140+	35.00	6.004	5.879	—	—	—	15,490	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
18,270	—	—	—	1,421	—	—	—	—
19,690	—	—	—	1,515	—	—	—	—
7,530	—	7,530	7,530	632	—	505	636	699
8,600	—	8,600	8,600	717	—	593	722	709
9,690	—	9,690	9,690	803	—	683	808	757
10,760	—	10,760	10,050	885	—	768	891	841
11,830	—	10,970	10,050	966	—	853	920	940
12,820	—	10,970	10,050	1,041	—	931	920	1,013
12,830	—	10,970	10,050	1,041	—	931	920	—
7,130	—	7,130	7,130	599	—	485	614	—
7,530	—	7,530	7,530	632	—	505	636	—
8,150	—	8,150	8,150	679	—	570	696	—
9,180	—	9,180	9,180	760	—	655	780	—
10,190	—	10,190	9,520	839	—	738	860	—
11,210	—	10,390	9,520	915	—	819	876	—
12,150	—	10,390	9,520	986	—	883	876	—
13,280	—	10,390	9,520	1,069	—	903	876	—
8,600	—	8,600	8,600	717	—	593	722	—
9,690	—	9,690	9,690	803	—	683	808	—
10,760	—	10,760	10,050	885	—	768	891	—
—	1,440	—	—	123	118	—	—	—
11,830	—	10,970	10,050	966	—	853	920	—
14,010	—	10,970	10,050	1,129	—	952	920	—
2,310	2,310	—	—	196	122	—	—	—
2,720	2,720	—	—	230	176	—	—	—
6,340	—	6,340	6,340	532	—	485	614	—
7,240	—	7,240	7,240	604	—	570	696	—
8,160	—	8,160	8,160	676	—	655	780	—
9,060	—	9,060	8,460	745	—	738	832	—
9,960	—	9,240	8,460	814	—	819	832	—
10,800	—	9,240	8,460	877	—	831	832	—
6,340	—	6,340	6,340	532	—	485	614	—
7,240	—	7,240	7,240	604	—	570	696	—
8,160	—	8,160	8,160	676	—	655	780	—
9,060	—	9,060	8,460	745	—	738	860	—
9,960	—	9,240	8,460	814	—	819	876	—
10,800	—	9,240	8,460	877	—	831	876	—
9,950	—	9,950	9,950	830	—	693	853	—
11,220	—	11,220	11,220	929	—	797	955	—
12,750	—	12,750	12,750	1,056	—	885	1,045	—
3,740	3,740	—	—	316	234	—	—	—
4,360	4,360	4,360	4,360	366	284	313	432	499
4,980	4,980	4,980	4,980	415	334	367	490	506
3,740	3,740	—	—	316	254	—	—	—
4,360	4,360	4,360	4,360	366	309	341	522	632
4,980	4,980	4,980	4,980	415	364	401	592	641
8,160	—	8,160	8,160	676	—	587	718	—
9,960	—	9,240	8,460	814	—	734	833	—
10,800	—	9,240	8,460	877	—	801	832	—
6,340	—	6,340	6,340	532	—	435	565	—
7,240	—	7,240	7,240	604	—	511	641	—
9,060	—	9,060	8,460	745	—	661	791	—
15,850	—	15,850	14,810	1,304	—	1,107	1,283	—
17,430	—	16,170	14,810	1,424	—	1,229	1,315	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
7	LS-140+	38.00	5.920	5.795	—	—	—	18,280
	LS-65	23.00	6.366	6.241	—	—	—	3,540
	LS-65	29.00	6.184	6.059	—	—	—	6,090
	LS-65+	20.00	6.456	6.331	—	—	—	2,480
	LS-65+	26.00	6.276	6.151	—	—	—	4,800
	N-80	23.00	6.366	6.241	7.656	6.151	7.390	3,830
	N-80	26.00	6.276	6.151	7.656	6.151	7.390	5,410
	N-80	29.00	6.184	6.059	7.656	6.059	7.390	7,020
	N-80	32.00	6.094	5.969	7.656	5.969	7.390	8,600
	N-80	35.00	6.004	5.879	7.656	5.879	7.530	10,180
	N-80	38.00	5.920	5.795	7.656	5.795	7.530	11,390
	P-110	26.00	6.276	6.151	7.656	6.151	7.390	6,210
	P-110	29.00	6.184	6.059	7.656	6.059	7.390	8,510
	P-110	32.00	6.094	5.969	7.656	5.969	7.390	10,760
	P-110	35.00	6.004	5.879	7.656	5.879	7.530	13,010
	P-110	38.00	5.920	5.795	7.656	5.795	7.530	15,110
	P-110+	41.00	5.820	5.695	—	—	—	16,990
	Q-125+	29.00	6.184	6.059	—	—	—	9,100
	Q-125+	32.00	6.094	5.969	—	—	—	11,720
	Q-125+	35.00	6.004	5.879	—	—	—	14,310
	Q-125+	38.00	5.920	5.795	—	—	—	16,750
	Q-125*+	41.00	5.820	5.695	—	—	—	19,300
	S-95+	23.00	6.366	6.241	—	—	—	5,650
	S-95+	26.00	6.276	6.151	—	—	—	7,800
	S-95	29.00	6.184	6.059	—	—	—	9,200
	S-95	32.00	6.094	5.969	—	—	—	10,400
	S-95+	35.00	6.004	5.879	—	—	—	11,650
	S-95+	38.00	5.920	5.795	—	—	—	13,440
	T-95	23.00	6.366	6.241	—	—	—	4,140
	T-95	26.00	6.276	6.151	—	—	—	8,600
	T-95	29.00	6.184	6.059	—	—	—	7,830
	T-95	32.00	6.094	5.969	—	—	—	9,750
	T-95	35.00	6.004	5.879	—	—	—	11,650
T-95	38.00	5.920	5.795	—	—	—	13,440	
T-95	41.00	5.820	5.695	—	—	—	14,670	
T-95	42.70	5.750	5.625	—	—	—	15,450	
T-95	46.40	5.626	5.500	—	—	—	16,820	
T-95	50.10	5.500	5.375	—	—	—	18,810	
T-95	53.60	5.376	5.251	—	—	—	19,480	
T-95	57.10	5.250	5.125	—	—	—	20,780	
V-150	41.00	5.820	5.695	—	—	—	22,820	
V-150*	29.00	6.184	6.059	7.656	—	—	9,800	
V-150*	32.00	6.094	5.969	7.656	—	—	13,020	
V-150*	35.00	6.004	5.879	7.656	—	—	16,230	
V-150*	38.00	5.920	5.795	7.656	—	—	19,240	
7 ⁵ / ₈	C-75	26.40	6.969	6.844	8.500	6.75	8.010	3,280
	C-75	29.70	6.875	6.750	8.500	6.75	8.010	4,670
	C-75	33.70	6.765	6.640	8.500	6.64	8.010	6,320
	C-75	39.00	6.625	6.500	8.500	6.5	8.010	8,430
	C-90	26.40	6.969	6.844	—	—	—	3,610
	C-90	29.70	6.875	6.750	—	—	—	5,040
	C-90	33.70	6.765	6.640	—	—	—	7,050
	C-90	39.00	6.625	6.500	—	—	—	9,620

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+ Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
18,900	—	16,170	14,810	1,534	—	1,341	1,315	—
5,150	5,150	5,150	5,150	433	331	364	494	—
6,630	—	6,630	6,630	549	—	492	628	—
4,420	4,420	4,420	4,420	374	272	300	427	—
5,880	5,880	5,880	5,880	491	389	428	561	—
6,340	—	6,340	6,340	532	—	442	588	666
7,240	—	7,240	7,240	604	—	519	667	675
8,160	—	8,160	8,160	676	—	597	746	721
9,060	—	9,060	8,460	745	—	672	823	801
9,960	—	9,240	8,460	814	—	746	876	895
10,800	—	9,240	8,460	877	—	814	876	965
9,960	—	9,960	9,960	830	—	693	853	844
11,220	—	11,220	11,220	929	—	797	955	902
12,460	—	12,460	11,640	1,025	—	897	1,053	1,002
13,700	—	12,700	11,640	1,119	—	996	1,096	1,118
14,850	—	12,700	11,640	1,205	—	1,087	1,096	1,207
16,230	—	12,700	11,640	1,307	—	1,111	1,096	—
12,750	—	12,750	12,750	1,056	—	885	1,045	—
14,160	—	14,160	13,220	1,165	—	996	1,152	—
15,560	—	14,330	13,220	1,272	—	1,106	1,183	—
16,880	—	14,430	13,220	1,370	—	1,207	1,183	—
18,440	—	14,430	13,220	1,485	—	1,244	1,183	—
7,530	—	7,530	7,530	632	—	512	659	—
8,600	—	8,600	8,600	717	—	602	747	—
9,690	—	9,690	9,690	803	—	692	836	—
10,760	—	10,760	10,050	885	—	779	922	—
11,830	—	10,970	10,050	966	—	865	964	—
12,830	—	10,970	10,050	1,041	—	944	964	—
7,530	—	7,530	7,530	632	—	505	636	—
8,600	—	8,600	8,600	717	—	593	722	—
9,690	—	9,690	9,690	803	—	683	808	—
10,760	—	10,760	10,050	885	—	768	891	—
11,830	—	10,970	10,050	966	—	853	920	—
12,830	—	10,970	10,050	1,041	—	931	920	—
14,010	—	10,970	10,050	1,129	—	952	920	—
14,840	—	—	—	1,189	—	—	—	—
16,320	—	—	—	1,294	—	—	—	—
17,810	—	—	—	1,399	—	—	—	—
19,290	—	—	—	1,500	—	—	—	—
20,780	—	—	—	1,600	—	—	—	—
22,130	—	17,320	15,870	1,782	—	1,488	1,402	—
—	—	15,300	15,300	1,267	—	1,049	1,296	—
—	—	16,990	15,870	1,398	—	1,180	1,363	—
—	—	17,320	15,870	1,526	—	1,311	1,363	—
—	—	17,320	15,870	1,644	—	1,430	1,363	—
5,650	—	5,650	5,650	564	—	461	624	700
6,450	—	6,450	6,450	641	—	542	709	700
7,400	—	7,400	7,400	729	—	635	806	766
8,610	—	8,610	8,610	839	—	751	929	851
6,780	—	6,780	6,780	677	—	532	681	—
7,750	—	7,750	7,750	769	—	625	773	—
8,880	—	8,880	8,880	875	—	733	880	—
10,330	—	10,330	10,330	1,007	—	867	1,013	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
7 ⁵ / ₈	C-90	42.80	6.501	6.376	—	—	—	11,890
	C-90	45.30	6.435	6.310	—	—	—	12,950
	C-90	47.10	6.375	6.250	—	—	—	13,540
	C-90	51.20	6.251	6.126	—	—	—	14,760
	C-90	55.30	6.125	6.000	—	—	—	15,960
	C-95	26.40	6.969	6.844	8.500	6.75	8.010	3,710
	C-95	29.70	6.875	6.750	8.500	6.75	8.010	5,120
	C-95	33.70	6.765	6.640	8.500	6.64	8.010	7,260
	C-95	39.00	6.625	6.500	8.500	6.5	8.010	9,980
	C-95	45.30	6.435	6.310	—	—	—	13,660
	C-95+	42.80	6.501	6.376	—	—	—	12,410
	C-95+	47.10	6.375	6.250	—	—	—	14,300
	F-25*	20.00	7.125	7.000	8.500	—	—	1,100
	H2S-90+	26.40	6.969	6.844	—	—	—	4,850
	H2S-90+	29.70	6.875	6.750	—	—	—	7,150
	H2S-90+	33.70	6.765	6.640	—	—	—	8,800
	H2S-90+	39.00	6.625	6.500	—	—	—	10,600
	H2S-90+	45.30	6.435	6.310	—	—	—	12,950
	H2S-95	45.30	6.435	6.310	—	—	—	13,660
	H2S-95+	26.40	6.969	6.844	—	—	—	4,850
	H2S-95+	29.70	6.875	6.750	—	—	—	7,150
	H2S-95+	33.70	6.765	6.640	—	—	—	8,800
	H2S-95+	39.00	6.625	6.500	—	—	—	10,600
	H-40	24.00	7.025	6.900	8.500	—	—	2,040
	HCL-80+	26.40	6.969	6.844	—	—	—	4,850
	HCL-80+	29.70	6.875	6.750	—	—	—	7,150
	HCL-80+	33.70	6.765	6.640	—	—	—	8,800
	HCL-80+	39.00	6.625	6.500	—	—	—	10,600
	HCL-80+	45.30	6.435	6.310	—	—	—	12,900
	HCN-80+	26.40	6.969	6.844	—	—	—	4,850
	HCN-80+	29.70	6.875	6.750	—	—	—	7,150
	HCN-80+	33.70	6.765	6.640	—	—	—	8,800
	HCN-80+	39.00	6.625	6.500	—	—	—	10,600
	HCN-80+	45.30	6.435	6.310	—	—	—	12,900
	HCP-110+	26.40	6.969	6.844	—	—	—	4,850
	HCP-110+	29.70	6.875	6.750	—	—	—	7,150
	HCP-110+	33.70	6.765	6.640	—	—	—	8,800
	HCQ-125+	33.70	6.765	6.640	—	—	—	8,800
	J-55	26.40	6.969	6.844	8.500	6.75	8.010	2,890
	K-55	26.40	6.969	6.844	8.500	6.75	8.010	2,890
	L-80	47.10	6.375	6.250	—	—	—	12,040
	L-80+	26.40	6.969	6.844	—	—	—	3,400
	L-80+	29.70	6.875	6.750	—	—	—	4,790
	L-80+	33.70	6.765	6.640	—	—	—	6,560
	L-80+	39.00	6.625	6.500	—	—	—	8,820
	L-80+	42.80	6.501	6.376	—	—	—	10,810
	L-80+	45.30	6.435	6.310	—	—	—	11,510
LS-140+	33.70	6.765	6.640	—	—	—	8,690	
LS-140+	39.00	6.625	6.500	—	—	—	12,930	
LS-65+	26.40	6.969	6.844	—	—	—	3,100	
LS-65+	29.70	6.875	6.750	—	—	—	4,310	
N-80	26.40	6.969	6.844	8.500	6.75	8.010	3,400	
N-80	29.70	6.875	6.750	8.500	6.75	8.010	4,790	
N-80	33.70	6.765	6.640	8.500	6.64	8.010	6,560	

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round	Thread	But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
11,610	—	11,610	11,010	1,122	—	983	1,129	—
12,290	—	11,810	11,010	1,183	—	1,045	1,189	—
12,910	—	11,810	11,010	1,237	—	1,100	1,238	—
14,190	—	—	—	1,348	—	—	—	—
15,490	—	—	—	1,458	—	—	—	—
7,150	—	7,150	7,150	714	—	560	716	774
8,180	—	8,180	8,180	811	—	659	813	774
9,380	—	9,380	9,380	923	—	772	925	846
10,900	—	10,900	10,900	1,063	—	914	1,065	941
12,970	—	12,460	11,620	1,248	—	1,101	1,251	—
12,250	—	12,250	11,620	1,185	—	1,037	1,187	—
13,630	—	12,460	11,620	1,306	—	1,159	1,300	—
—	1,430	—	145	138	—	—	—	—
6,780	—	6,780	6,780	677	—	553	691	—
7,750	—	7,750	7,750	769	—	650	785	—
8,880	—	8,880	8,880	875	—	762	894	—
10,330	—	10,330	10,330	1,007	—	901	1,029	—
12,290	—	11,810	11,010	1,183	—	1,086	1,208	—
12,970	—	12,460	11,620	1,248	—	1,101	1,251	—
7,150	—	7,150	7,150	714	—	560	716	—
8,180	—	8,180	8,180	811	—	659	813	—
9,380	—	9,380	9,380	923	—	772	925	—
10,900	—	10,900	10,900	1,063	—	914	1,065	—
2,750	2,750	—	276	212	—	—	—	—
6,020	—	6,020	6,020	602	—	533	691	—
6,890	—	6,890	6,890	683	—	650	785	—
7,900	—	7,900	7,900	778	—	762	894	—
9,180	—	9,180	9,180	895	—	901	1,029	—
10,920	—	10,490	9,790	1,051	—	1,086	1,177	—
6,020	—	6,020	6,020	602	—	553	691	—
6,890	—	6,890	6,890	683	—	650	785	—
7,900	—	7,900	7,900	778	—	762	894	—
9,180	—	9,180	9,180	895	—	901	1,029	—
10,920	—	10,490	9,790	1,051	—	1,086	1,208	—
8,280	—	8,280	8,280	827	—	654	845	—
9,470	—	9,470	9,470	940	—	769	960	—
10,860	—	10,860	10,860	1,069	—	901	1,093	—
12,340	—	12,340	12,340	1,215	—	1,009	1,197	—
4,140	4,140	4,140	4,140	414	315	346	483	553
4,140	4,140	4,140	4,140	414	342	377	581	700
11,480	—	10,490	9,790	1,100	—	997	1,160	—
6,020	—	6,020	6,020	602	—	482	635	—
6,890	—	6,890	6,890	683	—	566	721	—
7,900	—	7,900	7,900	778	—	664	820	—
9,180	—	9,180	9,180	895	—	786	945	—
10,320	—	10,320	9,790	998	—	891	1,053	—
10,920	—	10,490	9,790	1,051	—	947	1,109	—
13,820	—	13,820	13,820	1,361	—	1,128	1,334	—
16,070	—	16,070	16,070	1,567	—	1,335	1,536	—
4,890	4,890	4,890	4,890	489	368	403	554	—
5,590	—	5,590	5,590	555	—	474	629	—
6,020	—	6,020	6,020	602	—	490	659	737
6,890	—	6,890	6,890	683	—	575	749	737
7,900	—	7,900	7,900	778	—	674	852	806

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
7 ⁵ / ₈	N-80	39.00	6.625	6.500	8.500	6.5	8.010	8,810
	N-80+	42.80	6.501	6.376	—	—	—	10,810
	N-80+	45.30	6.435	6.310	—	—	—	11,510
	N-80+	47.10	6.375	6.250	—	—	—	12,040
	P-110	29.70	6.875	6.750	8.500	6.75	8.010	5,340
	P-110	33.70	6.765	6.640	8.500	6.64	8.010	7,850
	P-110	39.00	6.625	6.500	8.500	6.5	8.010	11,060
	P-110+	42.80	6.501	6.376	—	—	—	13,920
	P-110+	45.30	6.435	6.310	—	—	—	15,430
	P-110+	47.10	6.375	6.250	—	—	—	16,550
	Q-125	45.30	6.435	6.310	—	—	—	17,090
	Q-125+	33.70	6.765	6.640	—	—	—	8,350
	Q-125+	39.00	6.625	6.500	—	—	—	12,060
	Q-125+	42.80	6.501	6.376	—	—	—	15,350
	Q-125+	47.10	6.375	6.250	—	—	—	18,700
	S-95	45.30	6.435	6.310	—	—	—	13,660
	S-95+	26.40	6.969	6.844	—	—	—	4,850
	S-95+	29.70	6.875	6.750	—	—	—	7,150
	S-95+	33.70	6.765	6.640	—	—	—	8,800
	S-95+	39.00	6.625	6.500	—	—	—	10,600
	T-95	26.40	6.969	6.844	—	—	—	3,710
	T-95	29.70	6.875	6.750	—	—	—	5,140
	T-95	33.70	6.765	6.640	—	—	—	7,280
	T-95	39.00	6.625	6.500	—	—	—	10,000
	T-95	42.80	6.501	6.376	—	—	—	12,410
	T-95	45.30	6.435	6.310	—	—	—	13,660
	T-95	47.10	6.375	6.250	—	—	—	14,300
	T-95	51.20	6.251	6.126	—	—	—	15,580
T-95	55.30	6.125	6.000	—	—	—	16,850	
V-150	33.70	6.765	6.640	8.500	—	—	8,860	
V-150	39.00	6.625	6.500	8.500	—	—	13,450	
V-150	45.30	6.435	6.310	8.500	—	—	19,680	
7 ³ / ₄	C-90	46.10	6.560	6.435	—	—	—	12,740
	C-95	46.10	6.560	6.435	—	—	—	13,320
	H2S-90	46.10	6.560	6.435	—	—	—	12,740
	H2S-95	46.10	6.560	6.435	—	—	—	13,320
	HCL-80+	46.10	6.560	6.435	—	—	—	13,320
	L-80	46.10	6.560	6.435	—	—	—	11,340
	LS-140+	46.10	6.560	6.435	—	—	—	18,090
	P-110	46.10	6.560	6.435	—	—	—	14,990
	Q-125	46.10	6.560	6.435	—	—	—	16,580
	S-95+	46.10	6.560	6.435	—	—	—	13,320
	T-95	46.10	6.560	6.435	—	—	—	13,320
8 ⁵ / ₈	C-75	36.00	7.825	7.700	9.625	7.7	9.120	4,020
	C-75	40.00	7.725	7.600	9.625	7.6	9.120	5,350
	C-75	44.00	7.625	7.500	9.625	7.5	9.120	6,680
	C-75	49.00	7.511	7.386	9.625	7.386	9.120	8,200
	C-90	40.00	7.725	7.600	—	—	—	5,870
	C-90	44.00	7.625	7.500	—	—	—	7,490
	C-90	49.00	7.511	7.386	—	—	—	9,340
	C-95	36.00	7.825	7.700	9.625	7.7	9.120	4,360
	C-95	40.00	7.725	7.600	9.625	7.6	9.120	6,010

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
9,180	—	9,180	9,180	895	—	798	981	896
10,320	—	10,320	9,790	998	—	905	1,093	—
10,920	—	10,490	9,790	1,051	—	962	1,152	—
11,480	—	10,490	9,790	1,100	—	1,013	1,205	—
9,470	—	9,470	9,470	940	—	769	960	922
10,860	—	10,860	10,860	1,069	—	901	1,093	1,008
12,620	—	12,620	12,620	1,231	—	1,066	1,258	1,120
14,190	—	14,190	13,460	1,372	—	1,210	1,402	—
15,020	—	14,430	13,460	1,446	—	1,285	1,477	—
15,780	—	14,430	13,460	1,512	—	1,353	1,545	—
17,070	—	16,400	15,290	1,643	—	1,439	1,619	—
12,340	—	12,340	12,340	1,215	—	1,009	1,197	—
14,340	—	14,340	14,340	1,399	—	1,194	1,379	—
16,120	—	16,120	15,290	1,559	—	1,355	1,536	—
17,930	—	16,400	15,290	1,718	—	1,515	1,672	—
12,970	—	12,460	11,620	1,248	—	1,116	1,293	—
7,150	—	7,150	7,150	714	—	568	740	—
8,180	—	8,180	8,180	811	—	668	841	—
9,380	—	9,380	9,380	923	—	783	957	—
10,900	—	10,900	10,900	1,063	—	926	1,101	—
7,150	—	7,159	7,150	714	—	560	716	—
8,180	—	8,180	8,180	811	—	659	813	—
9,380	—	9,380	9,380	923	—	772	925	—
10,900	—	10,900	10,900	1,063	—	914	1,065	—
12,250	—	12,250	11,620	1,185	—	1,037	1,187	—
12,970	—	12,460	11,620	1,248	—	1,101	1,251	—
13,630	—	12,460	11,620	1,306	—	1,159	1,300	—
14,980	—	—	—	1,423	—	—	—	—
16,350	—	—	—	1,539	—	—	—	—
—	—	14,800	14,800	1,458	—	1,207	1,482	—
—	—	17,210	17,210	1,679	—	1,428	1,706	—
—	—	19,680	18,350	1,971	—	1,721	1,932	—
12,090	—	11,810	11,010	1,204	—	928	1,074	—
12,760	—	12,460	11,620	1,271	—	978	1,129	—
12,090	—	11,810	11,010	1,204	—	965	1,091	—
12,760	—	12,460	11,620	1,271	—	978	1,129	—
10,750	—	10,490	9,790	1,070	—	965	1,091	—
10,750	—	10,490	9,790	1,070	—	841	1,001	—
18,810	—	18,360	17,130	1,872	—	1,429	1,628	—
14,780	—	14,430	13,460	1,471	—	1,142	1,334	—
16,790	—	16,400	15,290	1,672	—	1,279	1,462	—
12,760	—	12,460	11,620	1,271	—	992	1,168	—
12,760	—	12,460	11,620	1,271	—	978	1,129	—
6,090	—	6,090	6,090	775	—	648	847	871
6,850	—	6,850	6,850	867	—	742	947	942
7,610	—	7,610	7,610	957	—	834	1,046	1,007
8,480	—	8,480	8,480	1,059	—	939	1,157	1,007
8,220	—	8,220	8,220	1,040	—	858	1,038	—
9,130	—	9,130	9,130	1,149	—	965	1,146	—
10,170	—	10,170	10,170	1,271	—	1,085	1,268	—
7,710	—	7,710	7,710	982	—	789	976	963
8,670	—	8,670	8,670	1,098	—	904	1,092	1,042

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
8 ⁵ / ₈	C-95	44.00	7.625	7.500	9.625	7.5	9.120	7,730
	C-95	49.00	7.511	7.386	9.625	7.386	9.120	9,690
	F-25*	24.00	8.097	7.972	9.625	—	—	950
	H2S-90+	40.00	7.725	7.600	—	—	—	7,900
	H2S-90+	44.00	7.625	7.500	—	—	—	9,100
	H2S-90+	49.00	7.511	7.386	—	—	—	10,400
	H2S-95+	40.00	7.725	7.600	—	—	—	7,900
	H2S-95+	44.00	7.625	7.500	—	—	—	9,100
	H2S-95+	49.00	7.511	7.386	—	—	—	10,400
	H-40	28.00	8.017	7.892	9.625	—	—	1,640
	H-40	32.00	7.921	7.796	9.625	—	—	2,210
	HCK-55+	24.00	8.097	7.972	—	—	—	1,780
	HCK-55+	28.00	8.017	7.892	—	—	—	2,680
	HCK-55+	32.00	7.921	7.796	—	—	—	4,130
	HCK-55+	36.00	7.825	7.700	—	—	—	5,300
	HCL-80+	36.00	7.825	7.700	—	—	—	6,060
	HCL-80+	40.00	7.725	7.600	—	—	—	7,900
	HCL-80+	44.00	7.625	7.500	—	—	—	9,100
	HCL-80+	49.00	7.511	7.386	—	—	—	10,400
	HCN-80+	36.00	7.825	7.700	—	—	—	6,060
	HCN-80+	40.00	7.725	7.600	—	—	—	7,900
	HCN-80+	44.00	7.625	7.500	—	—	—	9,100
	HCN-80+	49.00	7.511	7.386	—	—	—	10,400
	HCP-110+	40.00	7.725	7.600	—	—	—	7,900
	HCP-110+	44.00	7.625	7.500	—	—	—	9,100
	HCP-110+	44.00	7.625	7.500	—	—	—	9,100
	HCQ-125+	44.00	7.625	7.500	—	—	—	9,100
	J-55	24.00	8.097	7.972	9.625	—	—	1,370
	J-55	32.00	7.921	7.796	9.625	7.7	9.120	2,530
	J-55	36.00	7.825	7.700	9.625	7.7	9.120	3,450
	J-55+	24.00	8.097	7.972	—	—	—	1,370
	K-55+	24.00	8.097	7.972	9.625	—	—	1,370
	K-55	32.00	7.921	7.796	9.625	7.7	9.120	2,530
	K-55	36.00	7.825	7.700	9.625	7.7	9.120	3,450
	L-80	36.00	7.825	7.700	—	—	—	4,100
	L-80+	40.00	7.725	7.600	—	—	—	5,520
	L-80+	44.00	7.625	7.500	—	—	—	6,950
	L-80+	49.00	7.511	7.386	—	—	—	8,580
	LS-65+	24.00	8.097	7.972	—	—	—	1,430
	LS-65+	32.00	7.921	7.796	—	—	—	2,740
	LS-65+	36.00	7.825	7.700	—	—	—	3,760
	LS-65+	40.00	7.725	7.600	—	—	—	4,890
N-80	36.00	7.825	7.700	9.625	7.7	9.120	4,100	
N-80	40.00	7.725	7.600	9.625	7.6	9.120	5,520	
N-80	44.00	7.625	7.500	9.625	7.5	9.120	6,950	
N-80	49.00	7.511	7.386	9.625	7.386	9.120	8,570	
P-110	40.00	7.725	7.600	9.625	7.6	9.120	6,380	
P-110	44.00	7.625	7.500	9.625	7.5	9.120	8,400	
P-110	49.00	7.511	7.386	9.625	7.386	9.120	10,720	
Q-125+	44.00	7.625	7.500	—	—	—	8,980	
Q-125+	49.00	7.511	7.386	—	—	—	11,650	
S-95	49.00	7.511	7.386	—	—	—	10,400	
S-95+	40.00	7.725	7.600	—	—	—	7,900	
S-95+	44.00	7.625	7.500	—	—	—	9,100	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
9,640	—	9,640	9,640	1,212	—	1,017	1,206	1,113
10,740	—	10,740	10,740	1,341	—	1,144	1,334	1,113
1,340	—	173	161	—	—	—	—	—
8,220	—	8,220	8,220	1,040	—	892	1,057	—
9,130	—	9,130	9,130	1,149	—	1,004	1,167	—
10,170	—	10,170	10,170	1,271	—	1,129	1,291	—
8,670	—	8,670	8,670	1,098	—	904	1,092	—
9,640	—	9,640	9,640	1,212	—	1,017	1,206	—
10,740	—	10,740	10,740	1,341	—	1,144	1,334	—
2,470	2,470	—	318	233	—	—	—	—
2,860	2,860	—	366	279	—	—	—	—
2,950	2,950	—	—	381	326	—	—	—
3,390	3,390	3,390	3,390	437	414	464	651	—
3,930	3,930	3,930	3,930	503	497	556	749	—
4,460	4,460	4,460	4,460	568	579	648	847	—
6,490	—	6,490	6,490	827	—	779	945	—
7,300	—	7,300	7,300	925	—	892	1,057	—
8,120	—	8,120	8,120	1,021	—	1,004	1,167	—
9,040	—	9,040	9,040	1,129	—	1,129	1,291	—
6,490	—	6,490	6,490	827	—	779	945	—
7,300	—	7,300	7,300	925	—	892	1,057	—
8,120	—	8,120	8,120	1,021	—	1,004	1,167	—
9,040	—	9,040	9,040	1,129	—	1,129	1,291	—
10,040	—	10,040	10,040	1,271	—	1,055	1,228	—
11,160	—	11,160	11,160	1,404	—	1,186	1,423	—
12,680	—	12,680	12,680	1,595	—	1,330	1,562	—
2,950	2,950	—	381	244	—	—	—	—
3,930	3,930	3,930	3,930	503	372	417	579	686
4,460	4,460	4,460	4,460	568	434	486	654	688
2,950	2,950	—	—	381	244	—	—	—
2,950	2,950	—	—	381	263	—	—	—
3,930	3,930	3,930	3,930	503	402	452	690	869
4,460	4,460	4,460	4,460	568	468	526	780	871
6,490	—	6,490	6,490	—	827	—	678	864
7,300	—	7,300	7,300	925	—	776	966	—
8,120	—	8,120	8,120	1,021	—	874	1,066	—
9,040	—	9,040	9,040	1,129	—	983	1,180	—
3,480	3,480	—	—	451	302	—	—	—
4,640	4,640	4,640	4,640	595	435	487	664	—
5,280	5,280	5,280	5,280	672	506	567	751	—
5,930	—	5,930	5,930	751	—	649	839	—
6,490	—	6,490	6,490	827	—	688	895	917
7,300	—	7,300	7,300	925	—	788	1,001	992
8,120	—	8,120	8,120	1,021	—	887	1,105	1,060
9,040	—	9,040	9,040	1,129	—	997	1,222	1,060
10,040	—	10,040	10,040	1,271	—	1,055	1,288	1,240
11,160	—	11,160	11,160	1,404	—	1,186	1,423	1,326
12,430	—	12,430	12,430	1,553	—	1,335	1,574	1,326
12,680	—	12,680	12,680	1,595	—	1,330	1,562	—
14,130	—	14,130	14,130	1,765	—	1,496	1,728	—
10,740	—	10,740	10,740	1,341	—	1,159	1,377	—
8,670	—	8,670	8,670	1,098	—	915	1,127	—
9,640	—	9,640	9,640	1,212	—	1,030	1,244	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI	
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.		
	T-95	40.00	7.725	7.600	—	—	—	6,020	
	T-95	44.00	7.625	7.500	—	—	—	7,740	
	T-95	49.00	7.511	7.386	—	—	—	9,710	
	V-150*	44.00	7.625	7.500	9.625	—	—	9,640	
	V-150*	49.00	7.511	7.386	9.625	—	—	12,950	
95/8	C-75	40.00	8.835	8.679	10.625	8.599	10.100	2,980	
	C-75	43.50	8.755	8.599	10.625	8.599	10.100	3,750	
	C-75	47.00	8.681	8.525	10.625	8.525	10.100	4,630	
	C-75	53.50	8.535	8.379	10.625	8.379	10.100	6,380	
	C-90	40.00	8.835	8.679	—	—	—	3,250	
	C-90	43.50	8.755	8.599	—	—	—	4,010	
	C-90	47.00	8.681	8.525	—	—	—	5,000	
	C-90	53.50	8.535	8.379	—	—	—	7,120	
	C-90	58.40	8.435	8.279	—	—	—	8,560	
	C-90	59.40	8.407	8.251	—	—	—	8,980	
	C-90	64.90	8.281	8.125	—	—	—	10,800	
	C-90	70.30	8.157	8.001	—	—	—	12,610	
	C-90	75.60	8.031	7.875	—	—	—	13,670	
	C-95	40.00	8.835	8.679	10.625	8.599	10.100	3,330	
	C-95	43.50	8.755	8.599	10.625	8.599	10.100	4,130	
	C-95	47.00	8.681	8.525	10.625	8.525	10.100	5,080	
	C-95	53.50	8.535	8.379	10.625	8.379	10.100	7,330	
	C-95	58.40	8.435	8.279	—	—	—	8,880	
	F-25*	29.30	9.063	8.907	10.625	—	—	—	860
	H2S-90+	47.00	8.681	8.525	—	—	—	—	7,100
	H2S-90+	40.00	8.835	8.679	—	—	—	—	4,230
	H2S-90+	43.50	8.755	8.599	—	—	—	—	5,600
	H2S-90+	53.50	8.535	8.379	—	—	—	—	8,850
	H2S-95	40.00	8.835	8.679	—	—	—	—	4,230
	H2S-95+	43.50	8.755	8.599	—	—	—	—	5,600
	H2S-95+	47.00	8.681	8.525	—	—	—	—	7,100
	H2S-95+	53.50	8.535	8.379	—	—	—	—	8,850
	H-40	32.30	9.001	8.845	10.625	—	—	—	1,400
	H-40	36.00	8.921	8.765	10.625	—	—	—	1,740
	HCK-55+	36.00	8.921	8.765	—	—	—	—	2,980
	HCK-55+	40.00	8.835	8.679	—	—	—	—	4,230
	HCL-80+	40.00	8.835	8.679	—	—	—	—	4,230
	HCL-80+	43.50	8.755	8.599	—	—	—	—	5,600
	HCL-80+	47.00	8.681	8.525	—	—	—	—	7,100
	HCL-80+	53.50	8.535	8.379	—	—	—	—	8,850
	HCN-80+	40.00	8.835	8.679	—	—	—	—	4,230
	HCN-80+	43.50	8.755	8.599	—	—	—	—	5,600
	HCN-80+	47.00	8.681	8.525	—	—	—	—	7,100
	HCN-80+	53.50	8.535	8.379	—	—	—	—	8,850
	HCP-110+	43.50	8.755	8.599	—	—	—	—	5,600
	HCP-110+	47.00	8.681	8.525	—	—	—	—	7,100
	HCP-110+	53.50	8.535	8.379	—	—	—	—	8,850
	HCQ-125+	43.50	8.755	8.599	—	—	—	—	5,600
	HCQ-125+	47.00	8.681	8.525	—	—	—	—	7,100
	HCQ-125*+	53.50	8.535	8.379	—	—	—	—	8,850
	J-55	36.00	8.921	8.765	10.625	—	—	—	2,020
J-55	40.00	8.835	8.679	10.625	8.599	10.100	—	2,570	
K-55	36.00	8.921	8.765	10.625	—	—	—	2,020	

*Non API Standard. Shown for information only.

+ Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
8,670	—	8,670	8,670	1,098	—	904	1,092	—
9,640	—	9,640	9,640	1,212	—	1,017	1,206	—
10,740	—	10,740	10,740	1,341	—	1,144	1,334	—
—	—	15,220	15,220	1,914	—	1,591	1,925	—
—	—	16,950	16,950	2,118	—	1,789	2,130	—
5,390	—	5,390	5,390	859	—	694	926	975
5,930	—	5,930	5,930	942	—	776	1,016	975
6,440	—	6,440	6,440	1,018	—	852	1,098	1,032
7,430	—	7,430	7,430	1,166	—	999	1,257	1,173
6,460	—	6,460	6,460	1,031	—	804	1,021	—
7,120	—	7,120	7,120	1,130	—	899	1,119	—
7,720	—	7,720	7,720	1,221	—	987	1,210	—
8,920	—	8,920	8,920	1,399	—	1,157	1,386	—
9,740	—	9,740	9,740	1,519	—	1,272	1,504	—
9,970	—	—	—	1,553	—	—	—	—
11,000	—	—	—	1,701	—	—	—	—
12,010	—	—	—	1,845	—	—	—	—
13,040	—	—	—	1,989	—	—	—	—
6,820	—	6,820	6,820	1,088	—	847	1,074	1,078
7,510	—	7,510	7,510	1,193	—	948	1,178	1,078
8,150	—	8,150	8,150	1,289	—	1,040	1,273	1,141
9,410	—	9,410	9,410	1,477	—	1,220	1,458	1,297
10,280	—	10,280	10,280	1,604	—	1,341	1,583	—
—	1,280	—	206	185	—	—	—	—
7,720	—	7,720	7,720	1,221	—	1,027	1,234	—
6,460	—	6,460	6,460	1,031	—	837	1,042	—
7,120	—	7,120	7,120	1,130	—	936	1,142	—
8,920	—	8,920	8,920	1,399	—	1,205	1,414	—
6,820	—	6,820	6,820	1,088	—	847	1,074	—
7,510	—	7,510	7,510	1,193	—	948	1,178	—
8,150	—	8,150	8,150	1,289	—	1,040	1,273	—
9,410	—	9,410	9,410	1,477	—	1,220	1,458	—
2,270	2,270	—	365	254	—	—	—	—
2,560	2,560	—	410	294	—	—	—	—
3,520	3,520	3,520	3,520	564	526	605	829	—
3,950	3,950	3,950	3,950	630	604	694	926	—
5,750	—	5,750	5,750	916	—	837	1,042	—
6,330	—	6,330	6,330	1,005	—	936	1,142	—
6,870	—	6,870	6,870	1,086	—	1,027	1,234	—
7,930	—	7,930	7,930	1,244	—	1,205	1,414	—
5,750	—	5,750	5,750	916	—	837	1,042	—
6,330	—	6,330	6,330	1,005	—	936	1,142	—
6,870	—	6,870	6,870	1,086	—	1,027	1,234	—
7,930	—	7,930	7,930	1,244	—	1,205	1,414	—
8,700	—	8,700	8,700	1,381	—	1,106	1,388	—
9,440	—	9,440	9,440	1,493	—	1,213	1,500	—
10,900	—	10,900	10,900	1,710	—	1,422	1,718	—
9,890	—	9,890	9,890	1,570	—	1,240	1,527	—
10,730	—	10,730	10,730	1,697	—	1,361	1,650	—
12,390	—	12,390	12,390	1,943	—	1,595	1,890	—
3,520	3,520	3,520	3,520	564	394	453	639	—
3,950	3,950	3,950	3,950	630	452	520	714	770
3,520	3,520	3,520	3,520	564	423	489	755	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
9 ⁵ / ₈	K-55	40.00	8.835	8.679	10.625	8.599	10.100	2,570
	L-80	40.00	8.835	8.679	—	—	—	3,090
	L-80+	43.50	8.755	8.599	—	—	—	3,810
	L-80+	47.00	8.681	8.525	—	—	—	4,760
	L-80+	53.50	8.535	8.379	—	—	—	6,620
	L-80+	58.40	8.435	8.279	—	—	—	7,890
	LS-140+	43.50	8.755	8.599	—	—	—	5,600
	LS-140+	47.00	8.681	8.525	—	—	—	7,100
	LS-140+	53.50	8.535	8.379	—	—	—	8,850
	LS-65+	36.00	8.921	8.765	—	—	—	2,190
	LS-65+	40.00	8.835	8.679	—	—	—	2,770
	LS-65+	43.50	8.755	8.599	—	—	—	3,520
	N-80	40.00	8.835	8.679	10.625	8.599	10.100	3,090
	N-80	43.50	8.755	8.599	10.625	8.599	10.100	3,810
	N-80	47.00	8.681	8.525	10.625	8.525	10.100	4,750
	N-80	53.50	8.535	8.379	10.625	8.379	10.100	6,620
	N-80+	58.40	8.435	8.279	—	—	—	7,890
	P-110	43.50	8.755	8.599	10.625	8.599	10.100	4,430
	P-110	53.50	8.535	8.379	10.625	8.379	10.100	7,930
	P-110+	43.50	8.755	8.599	—	—	—	4,420
	P-110+	58.40	8.435	8.279	—	—	—	9,760
	P-110	47.00	8.681	8.525	10.625	8.525	10.100	5,310
	Q-125+	43.50	8.755	8.599	—	—	—	4,620
	Q-125+	47.00	8.681	8.525	—	—	—	5,640
	Q-125+	53.50	8.535	8.379	—	—	—	8,440
	Q-125+	58.40	8.435	8.279	—	—	—	10,530
	S-95	43.50	8.755	8.599	—	—	—	5,600
	S-95	40.00	8.835	8.679	—	—	—	4,230
	S-95+	47.00	8.681	8.525	—	—	—	7,100
	S-95+	53.50	8.535	8.379	—	—	—	8,850
	T-95	40.00	8.835	8.679	—	—	—	3,320
	T-95	43.50	8.755	8.599	—	—	—	4,120
	T-95	47.00	8.681	8.525	—	—	—	5,090
	T-95	53.50	8.535	8.379	—	—	—	7,340
	T-95	58.40	8.435	8.279	—	—	—	8,880
	T-95	59.40	8.407	8.251	—	—	—	9,320
	T-95	64.90	8.281	8.125	—	—	—	11,260
	T-95	70.30	8.157	8.001	—	—	—	13,180
	T-95	75.60	8.031	7.875	—	—	—	14,430
	V-150*	53.50	8.535	8.379	10.625	—	—	8,970
V-150*	58.40	8.435	8.279	10.625	—	—	11,570	
V-150*	61.10	8.375	8.219	10.625	—	—	13,130	
V-150*	71.80	8.125	7.969	10.625	—	—	19,640	
9 ³ / ₄	H2S-90	59.20	8.560	—	—	—	—	9,750
	H2S-95k	59.20	8.560	—	—	—	—	9,750
	HCP-110+	59.20	8.560	—	—	—	—	9,750
	LS-140+	59.20	8.560	—	—	—	—	10,820
	P-110+	59.20	8.560	—	—	—	—	9,490
	Q-125+	59.20	8.560	—	—	—	—	10,210
	S-95	59.20	8.560	—	—	—	—	9,750

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†Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
3,950	3,950	3,950	3,950	630	486	561	843	975
5,750	—	5,750	5,750	916	—	727	947	—
6,330	—	6,330	6,330	1,005	—	813	1,038	—
6,870	—	6,870	6,870	1,086	—	893	1,122	—
7,930	—	7,930	7,930	1,244	—	1,047	1,286	—
8,650	—	8,650	8,650	1,350	—	1,151	1,396	—
11,070	—	11,070	11,070	1,758	—	1,386	1,702	—
12,010	—	12,010	12,010	1,900	—	1,521	1,839	—
13,870	—	13,870	13,870	2,177	—	1,783	2,107	—
4,160	4,160	4,160	4,160	667	460	529	734	—
4,670	4,670	4,670	4,670	745	528	608	823	—
5,140	—	5,140	5,140	816	—	679	899	—
5,750	—	5,750	5,750	916	—	737	979	1,027
6,330	—	6,330	6,330	1,005	—	825	1,074	1,027
6,870	—	6,870	6,870	1,086	—	905	1,161	1,086
7,930	—	7,930	7,930	1,244	—	1,062	1,329	1,235
8,650	—	8,650	8,650	1,350	—	1,167	1,443	—
8,700	—	8,700	8,700	1,381	—	1,106	1,388	1,283
10,900	—	10,900	10,900	1,710	—	1,422	1,718	1,544
8,700	—	8,700	8,700	1,381	—	1,106	1,388	—
11,900	—	11,900	11,900	1,857	—	1,564	1,865	—
9,440	—	9,440	9,440	1,493	—	1,213	1,500	1,358
9,890	—	9,890	9,890	1,570	—	1,240	1,527	—
10,730	—	10,730	10,730	1,697	—	1,361	1,650	—
12,390	—	12,390	12,390	1,943	—	1,595	1,890	—
13,520	—	13,520	13,520	2,110	—	1,754	2,052	—
7,510	—	7,510	7,510	1,193	—	959	1,213	—
6,820	—	6,820	6,320	1,088	—	858	1,106	—
8,150	—	8,150	8,150	1,289	—	1,053	1,311	—
9,410	—	9,410	9,410	1,477	—	1,235	1,502	—
6,820	—	6,820	6,820	1,088	—	847	1,074	—
7,510	—	7,510	7,510	1,193	—	948	1,178	—
8,150	—	8,150	8,150	1,289	—	1,040	1,273	—
9,410	—	9,410	9,410	1,477	—	1,220	1,458	—
10,280	—	10,280	10,280	1,604	—	1,341	1,583	—
10,520	—	—	—	1,634	—	—	—	—
11,610	—	—	—	1,796	—	—	—	—
12,680	—	—	—	1,948	—	—	—	—
13,770	—	—	—	2,100	—	—	—	—
—	—	14,860	14,860	2,332	—	1,909	2,321	—
—	—	16,230	16,230	2,532	—	2,098	2,519	—
—	—	17,050	16,560	2,651	—	2,211	2,638	—
—	—	18,060	16,560	3,136	—	2,672	2,692	—
9,610	—	9,610	9,610	1,540	—	1,175	1,383	—
10,150	—	10,150	10,150	1,626	—	1,189	1,426	—
11,750	—	11,750	11,750	1,882	—	1,387	1,681	—
14,950	—	14,950	14,950	2,396	—	1,739	2,061	—
11,750	—	11,750	11,750	1,882	—	1,387	1,681	—
13,350	—	13,350	13,350	2,139	—	1,555	1,850	—
10,150	—	10,150	10,150	1,626	—	1,204	1,469	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI	
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.		
97/8	H2S-90	62.80	8.625	—	—	—	—	10,180	
	H2S-95k	62.80	8.625	—	—	—	—	10,180	
	LS-140+	62.80	8.625	—	—	—	—	11,870	
	P-110+	62.80	8.625	—	—	—	—	10,280	
	Q-125+	62.80	8.625	—	—	—	—	11,140	
	S-95	62.80	8.625	—	—	—	—	10,180	
103/4	C-75	51.00	9.850	9.694	11.750	9.694	11.460	3,100	
	C-75	55.50	9.760	9.604	11.750	9.604	11.460	3,950	
	C-90	51.00	9.850	9.694	—	—	—	3,400	
	C-90	55.50	9.760	9.604	—	—	—	4,160	
	C-90	60.70	9.660	9.504	—	—	—	5,460	
	C-90	65.70	9.560	9.404	—	—	—	6,760	
	C-90	73.20	9.406	9.250	—	—	—	8,760	
	C-90	79.20	9.282	9.126	—	—	—	10,370	
	C-90	85.30	9.156	9.000	—	—	—	12,010	
	C-95	51.00	9.850	9.694	11.750	9.694	11.460	3,490	
	C-95	55.50	9.760	9.604	11.750	9.604	11.460	4,300	
	C-95	60.70	9.660	9.504	—	—	—	5,590	
	C-95	65.70	9.560	9.404	—	—	—	6,960	
	F-25*	32.75	10.192	10.036	11.750	—	—	—	650
	H2S-90	51.00	9.850	9.694	—	—	—	—	4,460
	H2S-90	60.70	9.660	9.504	—	—	—	—	7,550
	H2S-90+	55.50	9.760	9.604	—	—	—	—	5,950
	H2S-90+	65.70	9.560	9.404	—	—	—	—	8,640
	H2S-90+	71.10	9.450	9.294	—	—	—	—	9,600
	H2S-95	51.00	9.850	9.694	—	—	—	—	4,460
	H2S-95	55.50	9.760	9.604	—	—	—	—	5,950
	H2S-95	71.10	9.450	9.294	—	—	—	—	9,600
	H2S-95+	60.70	9.660	9.504	—	—	—	—	7,550
	H2S-95+	65.70	9.560	9.404	—	—	—	—	8,640
	H-40	32.75	10.192	10.036	11.750	—	—	—	—
	H-40	40.50	10.050	9.894	11.750	—	—	—	1,420
	HCK-55+	40.50	10.050	9.894	—	—	—	—	2,100
	HCK-55+	45.50	9.950	9.794	—	—	—	—	3,130
	HCK-55+	51.00	9.850	9.694	—	—	—	—	4,420
	HCK-55+	55.50	9.760	9.604	—	—	—	—	5,220
	HCL-80+	51.00	9.850	9.694	—	—	—	—	4,460
	HCL-80+	55.50	9.760	9.604	—	—	—	—	5,950
	HCL-80+	60.70	9.660	9.504	—	—	—	—	7,550
	HCL-80+	65.70	9.560	9.404	—	—	—	—	8,640
	HCN-80+	40.50	10.050	9.894	—	—	—	—	2,100
	HCN-80+	45.50	9.950	9.875	—	—	—	—	3,130
	HCN-80+	51.00	9.850	9.694	—	—	—	—	4,460
	HCN-80+	55.50	9.760	9.604	—	—	—	—	5,950
	HCN-80+	60.70	9.660	9.504	—	—	—	—	7,550
	HCN-80+	65.70	9.560	9.404	—	—	—	—	8,640
HCP-110+	51.00	9.850	9.694	—	—	—	—	4,460	
HCP-110+	55.50	9.760	9.604	—	—	—	—	5,950	
HCP-110+	60.70	9.660	9.504	—	—	—	—	7,550	
HCP-110+	65.70	9.560	9.404	—	—	—	—	8,640	
HCP-110+	71.10	9.450	9.294	—	—	—	—	9,600	
HCQ-125	60.70	9.660	9.504	—	—	—	—	7,550	
HCQ-125+	51.00	9.850	9.694	—	—	—	—	4,460	

*Non API Standard. Shown for information only.

+Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
9,970	—	9,970	9,940	1,635	—	1,096	1,304	—
10,520	—	10,520	10,490	1,725	—	1,109	1,344	—
15,510	—	15,510	15,460	2,543	—	1,622	1,942	—
12,180	—	12,180	12,140	1,998	—	1,294	1,584	—
13,840	—	13,840	13,800	2,270	—	1,451	1,743	—
10,520	—	10,520	10,490	1,725	—	1,123	1,385	—
5,490	5,490	—	5,490	1,092	756	—	1,160	1,383
6,040	6,040	—	6,040	1,196	843	—	1,271	1,515
6,590	6,590	—	6,590	1,311	879	—	1,287	—
7,250	7,250	—	7,250	1,435	979	—	1,409	—
7,980	7,980	—	7,980	1,573	1,089	—	1,544	—
8,720	8,720	—	8,720	1,708	1,198	—	1,677	—
9,850	—	—	—	1,915	—	—	—	—
10,750	—	—	—	2,079	—	—	—	—
11,680	—	—	—	2,243	—	—	—	—
6,960	6,960	—	6,960	1,383	927	—	1,354	1,529
7,660	7,660	—	7,660	1,515	1,032	—	1,483	1,675
8,430	8,430	—	8,430	1,660	1,148	—	1,625	—
9,200	9,200	—	9,200	1,803	1,263	—	1,765	—
—	1,140	—	—	229	196	—	—	—
6,590	6,590	—	6,590	1,311	916	—	1,316	—
7,980	7,980	—	7,980	1,573	1,136	—	1,579	—
7,250	7,250	—	7,250	1,435	1,021	—	1,441	—
8,720	8,720	—	8,720	1,708	1,249	—	1,716	—
9,520	9,200	—	8,980	1,856	1,317	—	1,822	—
6,960	6,960	—	6,960	1,383	927	—	1,354	—
7,660	7,660	—	7,660	1,515	1,032	—	1,483	—
10,050	9,710	—	9,480	1,959	1,388	—	1,918	—
8,430	8,430	—	8,430	1,660	1,148	—	1,625	—
9,200	9,200	—	9,200	1,803	1,263	—	1,765	—
1,820	1,820	—	—	367	205	—	—	—
2,280	2,280	—	—	457	314	—	—	—
3,130	3,130	—	3,130	629	562	—	911	—
3,580	3,580	—	3,580	715	659	—	1,037	—
4,030	4,030	—	4,030	801	756	—	1,160	—
4,430	4,430	—	4,430	877	843	—	1,271	—
5,860	5,860	—	5,860	1,165	906	—	1,316	—
6,450	6,450	—	6,450	1,276	1,010	—	1,441	—
7,100	7,100	—	7,100	1,398	1,123	—	1,579	—
7,750	7,750	—	7,750	1,519	1,236	—	1,716	—
4,560	4,560	—	4,560	915	681	—	1,034	—
5,210	5,210	—	5,210	1,040	799	—	1,175	—
5,860	5,860	—	5,860	1,165	916	—	1,316	—
6,450	6,450	—	6,450	1,276	1,021	—	1,441	—
7,100	7,100	—	7,100	1,398	1,136	—	1,579	—
7,750	7,750	—	7,750	1,519	1,249	—	1,716	—
8,060	8,060	—	8,060	1,602	1,080	—	1,594	—
8,860	8,860	—	8,860	1,754	1,203	—	1,745	—
9,760	9,760	—	9,760	1,922	1,338	—	1,912	—
10,650	10,650	—	10,650	2,088	1,472	—	2,077	—
11,640	11,240	—	10,980	2,269	1,618	—	2,257	—
11,090	11,090	—	11,090	2,184	1,503	—	2,109	—
9,160	9,160	—	9,160	1,820	1,213	—	1,758	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
10 ³ / ₄	HCC-125+	55.50	9.760	9.604	—	—	—	5,950
	HCC-125+	65.70	9.560	9.404	—	—	—	8,640
	J-55	40.50	10.050	9.894	11.750	—	—	1,580
	J-55	45.50	9.950	9.794	11.750	9.794	11.460	2,090
	J-55	51.00	9.850	9.694	11.750	9.694	11.460	2,700
	K-55	40.50	10.050	9.894	11.750	—	—	1,580
	K-55	45.50	9.950	9.794	11.750	9.794	11.460	2,090
	K-55	51.00	9.850	9.694	11.750	9.694	11.460	2,700
	L-80	51.00	9.850	9.694	—	—	—	3,220
	L-80	60.70	9.660	9.504	—	—	—	5,160
	L-80+	55.50	9.760	9.604	—	—	—	4,020
	L-80+	65.70	9.560	9.404	—	—	—	6,300
	LS-140+	51.00	9.850	9.694	—	—	—	4,460
	LS-140+	55.50	9.760	9.604	—	—	—	5,950
	LS-140+	60.70	9.660	9.504	—	—	—	7,550
	LS-140+	65.70	9.560	9.404	—	—	—	8,640
	LS-140+	71.10	9.450	9.294	—	—	—	10,570
	LS-65	51.00	9.850	9.694	—	—	—	2,870
	LS-65	45.50	9.950	9.794	—	—	—	2,280
	LS-65+	40.50	10.050	9.894	—	—	—	1,680
	LS-65+	55.50	9.760	9.604	—	—	—	3,690
	N-80	45.50	9.950	9.875	—	—	—	2,470
	N-80	51.00	9.850	9.694	11.750	9.694	11.460	3,220
	N-80	55.50	9.760	9.604	11.750	9.604	11.460	4,020
	N-80+	60.70	9.660	9.504	—	—	—	5,160
	N-80+	65.70	9.560	9.404	—	—	—	6,300
	P-110	51.00	9.850	9.694	11.750	9.694	11.460	3,670
	P-110	55.50	9.760	9.604	11.750	9.604	11.460	4,630
	P-110	60.70	9.660	9.504	11.750	9.504	11.460	5,860
	P-110	65.70	9.560	9.404	11.750	—	—	7,490
	P-110*	71.10	9.450	9.294	11.750	—	—	9,280
	Q-125	51.00	9.850	9.694	—	—	—	3,740
	Q-125	60.70	9.660	9.504	—	—	—	6,070
	Q-125+	55.50	9.760	9.604	—	—	—	4,850
	Q-125+	65.70	9.560	9.404	—	—	—	7,920
	Q-125+	71.10	9.450	9.294	—	—	—	9,990
	S-95	60.70	9.660	9.504	—	—	—	7,550
	S-95	65.70	9.560	9.404	—	—	—	8,640
	S-95+	51.00	9.850	9.694	—	—	—	4,460
	S-95+	55.50	9.760	9.604	—	—	—	5,950
S-95+	71.10	9.450	9.294	—	—	—	9,600	
T-95	51.00	9.850	9.694	—	—	—	3,480	
T-95	55.50	9.760	9.604	—	—	—	4,290	
T-95	60.70	9.660	9.504	—	—	—	5,590	
T-95	65.70	9.560	9.404	—	—	—	6,960	
T-95	73.20	9.406	9.250	—	—	—	9,090	
T-95	79.20	9.282	9.126	—	—	—	10,800	
T-95	85.30	9.156	9.000	—	—	—	12,540	
V-150*	65.70	9.560	9.404	11.750	—	—	8,330	
V-150*	71.10	9.450	9.294	11.750	—	—	10,890	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
10,070	10,070	—	10,070	1,993	1,351	—	1,925	—
12,110	12,110	—	12,110	2,373	1,653	—	2,291	—
3,130	3,130	—	3,130	629	420	—	700	—
3,580	3,580	—	3,580	715	493	—	796	975
4,030	4,030	—	4,030	801	565	—	891	1,092
3,130	3,130	—	3,130	629	450	—	819	—
3,580	3,580	—	3,580	715	528	—	931	1,236
4,030	4,030	—	4,030	801	606	—	1,043	1,383
5,860	5,860	—	5,860	1,165	794	—	1,190	—
7,100	7,100	—	7,100	1,398	983	—	1,428	—
6,450	6,450	—	6,450	1,276	884	—	1,303	—
7,750	7,750	—	7,750	1,519	1,082	—	1,551	—
10,260	10,260	—	10,260	2,039	1,356	—	1,959	—
11,280	11,280	—	11,280	2,233	1,510	—	2,146	—
12,420	12,420	—	12,420	2,446	1,680	—	2,351	—
13,560	13,560	—	13,560	2,657	1,848	—	2,554	—
14,810	14,310	—	13,980	2,888	2,031	—	2,775	—
4,760	4,760	—	4,760	946	661	—	1,026	—
4,230	4,230	—	4,230	845	576	—	916	—
3,700	3,700	—	3,700	743	491	—	806	—
5,240	5,240	—	5,240	877	736	—	1,124	—
5,210	5,210	—	5,210	1,040	701	—	1,097	—
5,860	5,860	—	5,860	1,165	804	—	1,228	1,456
6,450	6,450	—	6,450	1,276	895	—	1,345	1,595
7,100	7,100	—	7,100	1,398	996	—	1,473	—
7,750	7,750	—	7,750	1,519	1,096	—	1,600	—
8,060	8,060	—	8,060	1,602	1,080	—	1,594	1,820
8,860	8,860	—	8,860	1,754	1,203	—	1,745	1,993
9,760	9,760	—	9,760	1,922	1,338	—	1,912	2,000
10,650	10,650	—	10,650	2,088	1,472	—	2,077	—
—	11,240	—	10,980	2,269	1,618	—	2,418	—
9,160	9,160	—	9,160	1,820	1,213	—	1,758	—
11,090	11,090	—	11,090	2,184	1,503	—	2,109	—
10,070	10,070	—	10,070	1,993	1,351	—	1,925	—
12,110	12,110	—	12,110	2,373	1,653	—	2,291	—
13,230	12,780	—	12,480	2,578	1,817	—	2,489	—
8,430	8,430	—	8,430	1,660	1,161	—	1,670	—
9,200	9,200	—	9,200	1,803	1,277	—	1,814	—
6,960	6,960	—	6,960	1,383	937	—	1,392	—
7,660	7,660	—	7,660	1,515	1,043	—	1,524	—
10,050	9,710	—	9,480	1,959	1,403	—	1,971	—
6,960	6,960	—	6,960	1,383	927	—	1,354	—
7,660	7,660	—	7,660	1,515	1,032	—	1,483	—
8,430	8,430	—	8,430	1,660	1,148	—	1,625	—
9,200	9,200	—	9,200	1,803	1,263	—	1,765	—
10,390	—	—	—	2,021	—	—	—	—
11,350	—	—	—	2,194	—	—	—	—
12,330	—	—	—	2,367	—	—	—	—
—	14,530	—	14,530	2,847	1,978	—	2,799	—
—	15,330	—	14,970	3,094	2,174	—	2,957	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
1 13/4	C-75	60.00	10.772	10.616	12.750	—	—	3,070
	C-90	60.00	10.772	10.616	—	—	—	3,360
	C-95	60.00	10.772	10.616	12.750	—	—	3,440
	F-25*	38.00	11.150	10.994	12.750	—	—	620
	H2S-90+	60.00	10.772	10.616	—	—	—	4,410
	H2S-90+	65.00	10.682	10.526	—	—	—	5,140
	H2S-90+	71.00	10.586	10.430	—	—	—	7,280
	H2S-95	65.00	10.682	10.526	—	—	—	5,740
	H2S-95+	60.00	10.772	10.616	—	—	—	4,410
	H2S-95+	71.00	10.586	10.430	—	—	—	7,280
	H-40	42.00	11.084	10.928	12.750	—	—	1,070
	HCK-55+	47.00	11.000	10.844	—	—	—	2,000
	HCK-55+	54.00	10.880	10.724	—	—	—	3,100
	HCK-55+	60.00	10.772	10.616	—	—	—	4,360
	HCL-80+	60.00	10.772	10.616	—	—	—	4,410
	HCL-80+	65.00	10.682	10.526	—	—	—	5,740
	HCN-80+	60.00	10.772	10.616	—	—	—	4,410
	HCN-80+	65.00	10.682	10.526	—	—	—	5,740
	HCP-110+	60.00	10.772	10.616	—	—	—	4,410
	HCP-110+	65.00	10.682	10.526	—	—	—	5,740
	HCP-110+	71.00	10.586	10.430	—	—	—	7,280
	HCQ-125+	60.00	10.772	10.616	—	—	—	4,410
	HCQ-125+	65.00	10.682	10.526	—	—	—	5,740
	HCQ-125+	71.00	10.586	10.430	—	—	—	7,280
	J-55	47.00	11.000	10.844	12.750	—	—	1,510
	J-55	54.00	10.880	10.724	12.750	—	—	2,070
	J-55	60.00	10.772	10.616	12.750	—	—	2,660
	K-55	47.00	11.000	10.844	12.750	—	—	1,510
	K-55	54.00	10.880	10.724	12.750	—	—	2,070
	K-55	60.00	10.772	10.616	12.750	—	—	2,660
	L-80	65.00	10.682	10.526	—	—	—	3,870
	L-80+	60.00	10.772	10.616	—	—	—	3,180
	LS-140	71.00	10.586	10.430	—	—	—	7,280
	LS-140+	65.00	10.682	10.526	—	—	—	5,740
	LS-65	65.00	10.682	10.526	—	—	—	3,580
	LS-65+	47.00	11.000	10.844	—	—	—	1,590
	LS-65+	54.00	10.880	10.724	—	—	—	2,250
	LS-65+	60.00	10.772	10.616	—	—	—	2,840
	N-80	60.00	10.772	10.616	12.750	—	—	3,180
	N-80+	65.00	10.682	10.625	—	—	—	3,870
P-110+	65.00	10.682	10.526	—	—	—	4,480	
P-110+	71.00	10.586	10.430	—	—	—	5,470	
Q-125+	60.00	10.772	10.616	—	—	—	3,680	
Q-125+	65.00	10.682	10.526	—	—	—	4,690	
Q-125+	71.00	10.586	10.430	—	—	—	5,760	
S-95	60.00	10.772	10.616	—	—	—	4,410	
S-95	71.00	10.586	10.430	—	—	—	7,280	
S-95+	65.00	10.682	10.526	—	—	—	5,740	
T-95	60.00	10.772	10.616	—	—	—	3,440	
1 17/8	H2S-90	71.80	10.711	—	—	—	—	7,190
	H2S-95+	71.80	10.711	—	—	—	—	7,190
	HCP-110+	71.80	10.711	—	—	—	—	7,190
	HCQ-125+	71.80	10.711	—	—	—	—	7,190

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+ Lone Star Pipe Data

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NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
5,460	5,460	—	5,460	1,298	869	—	1,361	—
6,550	6,550	—	6,550	1,557	1,011	—	1,517	—
6,920	6,920	—	6,920	1,644	1,066	—	1,596	—
—	1,120	—	—	270	222	—	—	—
6,550	6,550	—	6,550	1,557	1,055	—	1,555	—
7,160	7,160	—	7,160	1,639	1,164	—	1,691	—
7,800	7,800	—	7,800	1,838	1,226	—	1,790	—
7,560	7,560	—	7,560	1,788	1,177	—	1,736	—
6,920	6,920	—	6,920	1,644	1,066	—	1,596	—
8,230	8,230	—	8,230	1,940	1,293	—	1,884	—
1,980	1,980	—	—	478	307	—	—	—
3,070	3,070	—	3,070	737	638	—	1,054	—
3,560	3,560	—	3,560	850	760	—	1,216	—
4,010	4,010	—	4,010	952	869	—	1,361	—
5,830	5,830	—	5,830	1,384	1,055	—	1,555	—
6,360	6,360	—	6,360	1,505	1,152	—	1,691	—
5,830	5,830	—	5,830	1,384	1,055	—	1,555	—
6,360	6,360	—	6,360	1,505	1,164	—	1,691	—
8,010	8,010	—	8,010	1,903	1,242	—	1,877	—
8,750	8,750	—	8,750	2,070	1,371	—	2,041	—
9,530	9,530	—	9,530	2,246	1,506	—	2,215	—
9,100	9,100	—	9,100	2,163	1,396	—	2,074	—
9,940	9,940	—	9,940	2,352	1,540	—	2,256	—
10,840	10,840	—	10,840	2,552	1,693	—	2,448	—
3,070	3,070	—	3,070	737	477	—	807	—
3,560	3,560	—	3,560	850	568	—	931	—
4,010	4,010	—	4,010	952	649	—	1,042	—
3,070	3,070	—	3,070	737	509	—	935	—
3,560	3,560	—	3,560	850	606	—	1,079	—
4,010	4,010	—	4,010	952	693	—	1,208	—
6,360	6,360	—	6,360	1,505	1,007	—	1,521	—
5,830	5,830	—	5,830	1,384	913	—	1,399	—
12,140	12,140	—	12,140	2,859	1,893	—	2,730	—
11,130	11,130	—	11,130	2,634	1,722	—	2,516	—
5,170	5,170	—	5,170	1,223	837	—	1,307	—
3,630	3,630	—	3,630	871	557	—	931	—
4,210	4,210	—	4,210	1,005	665	—	1,074	—
4,730	4,730	—	4,730	1,125	759	—	1,201	—
5,830	5,830	—	5,830	1,384	924	—	1,440	—
6,360	6,360	—	6,360	1,505	1,019	—	1,566	—
8,750	8,750	—	8,750	2,070	1,371	—	2,041	—
9,530	9,530	—	9,530	2,246	1,506	—	2,215	—
9,100	9,100	—	9,100	2,163	1,396	—	2,074	—
9,940	9,940	—	9,940	2,352	1,540	—	2,256	—
10,840	10,840	—	10,840	2,552	1,693	—	2,448	—
6,920	6,920	—	6,920	1,644	1,077	—	1,638	—
8,230	8,230	—	8,230	1,940	1,306	—	1,933	—
7,560	7,560	—	7,560	1,788	1,189	—	1,781	—
6,920	6,920	—	6,920	1,644	1,066	—	1,596	—
7,270	7,270	—	7,270	1,858	1,129	—	1,647	—
8,150	8,150	—	8,150	1,962	1,141	—	1,691	—
9,430	9,430	—	9,430	2,271	1,329	—	1,988	—
10,720	10,720	—	10,720	2,581	1,494	—	2,198	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resistance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
11 ⁷ / ₈	LS-140 ^a	71.80	10.711	—	—	—	—	7,190
	P-110 ^a	71.80	10.711	—	—	—	—	5,290
	Q-125 ^a	71.80	10.711	—	—	—	—	5,630
	S-95	71.80	10.711	—	—	—	—	7,190
13 ³ / ₈	C-75	72.00	12.347	12.191	14.375	—	—	2,590
	C-75*	77.00	12.275	12.119	14.375	—	—	2,990
	C-75*	85.00	12.159	12.003	14.375	—	—	3,810
	C-75*	98.00	11.937	11.781	14.375	—	—	5,720
	C-90	68.00	12.415	12.259	—	—	—	2,320
	C-90	72.00	12.347	12.191	—	—	—	2,780
	C-95	68.00	12.415	12.259	—	—	—	2,330
	C-95	72.00	12.347	12.191	14.375	—	—	2,820
	F-25*	48.00	12.715	12.559	14.375	—	—	560
	H2S-90	72.00	12.347	12.191	—	—	—	3,470
	H2S-90	80.70	12.215	12.059	—	—	—	4,990
	H2S-95	72.00	12.347	12.191	—	—	—	3,470
	H2S-95	80.70	12.215	12.059	—	—	—	4,990
	H-40	48.00	12.715	12.559	14.375	—	—	770
	HCK-55+	54.50	12.615	12.459	—	—	—	1,400
	HCK-55+	61.00	12.515	12.359	—	—	—	2,040
	HCK-55+	68.00	12.415	12.259	—	—	—	2,850
	HCL-80+	68.00	12.415	12.259	—	—	—	2,910
	HCL-80+	72.00	12.347	12.191	—	—	—	3,470
	HCN-80+	68.00	12.415	12.259	—	—	—	2,910
	HCN-80+	72.00	12.347	12.191	—	—	—	3,470
	HCP-110+	68.00	12.415	12.259	—	—	—	2,910
	HCP-110+	72.00	12.347	12.191	—	—	—	3,470
	HCP-110+	80.70	12.215	12.059	—	—	—	4,990
	HCP-110+	86.00	12.125	11.969	—	—	—	6,240
	HCQ-125+	72.00	12.347	12.191	—	—	—	3,470
	HCQ-125+	80.70	12.215	12.059	—	—	—	4,990
	HCQ-125+	86.00	12.125	11.969	—	—	—	6,240
	J-55	54.50	12.615	12.459	14.375	—	—	1,130
	J-55	61.00	12.515	12.359	14.375	—	—	1,540
	J-55	68.00	12.415	12.259	14.375	—	—	1,950
	K-55	54.50	12.615	12.459	14.375	—	—	1,130
	K-55	61.00	12.515	12.359	14.375	—	—	1,540
	K-55	68.00	12.415	12.259	14.375	—	—	1,950
	L-80	72.00	12.347	12.191	—	—	—	2,670
	L-80+	68.00	12.415	12.259	—	—	—	2,260
	LS-140+	72.00	12.347	12.191	—	—	—	3,470
	LS-65	54.50	12.615	12.459	—	—	—	1,140
	LS-65	68.00	12.415	12.259	—	—	—	2,110
	LS-65+	61.00	12.515	12.359	—	—	—	1,620
	LS-65+	72.00	12.347	12.191	—	—	—	2,430
	N-80	72.00	12.347	12.191	14.375	—	—	2,670
N-80	85.00	12.159	12.003	14.375	—	—	3,870	
N-80*	77.00	12.275	12.119	14.375	—	—	3,100	
N-80*	98.00	11.937	11.781	14.375	—	—	5,910	
N-80+	68.00	12.415	12.259	—	—	—	2,260	
P-110*	72.00	12.347	12.191	14.375	—	—	2,880	
P-110+	68.00	12.415	12.259	—	—	—	2,340	
P-110+	80.70	12.215	12.059	—	—	—	4,000	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
12,010	12,010	—	12,010	2,891	1,671	—	2,451	—
9,430	9,430	—	9,430	2,271	1,329	—	1,988	—
10,720	10,720	—	10,720	2,581	1,494	—	2,198	—
8,150	8,150	—	8,150	1,962	1,153	—	1,735	—
5,040	5,040	—	5,040	1,558	978	—	1,598	—
—	5,400	—	5,400	1,662	1,054	—	2,054	—
—	5,970	—	5,970	1,829	1,177	—	2,261	—
—	6,270	—	6,120	2,144	1,408	—	2,296	—
5,650	5,650	—	5,650	1,750	1,057	—	1,683	—
6,050	6,050	—	6,050	1,869	1,142	—	1,798	—
5,970	5,970	—	5,970	1,847	1,114	—	1,772	—
6,390	6,390	—	6,390	1,973	1,204	—	1,893	—
—	1,080	—	—	338	260	—	—	—
6,050	6,050	—	6,050	1,869	1,192	—	1,850	—
6,830	—	—	7,340	2,098	—	—	2,077	—
6,390	6,390	—	6,390	1,973	1,204	—	1,893	—
7,210	—	—	7,210	2,215	—	—	2,125	—
1,730	1,730	—	—	541	322	—	—	—
2,730	2,730	—	2,730	853	689	—	1,194	—
3,090	3,090	—	3,090	962	798	—	1,345	—
3,450	3,450	—	3,450	1,069	905	—	1,496	—
5,020	5,020	—	5,020	1,556	1,093	—	1,732	—
5,380	5,380	—	5,380	1,661	1,181	—	1,850	—
5,020	5,020	—	5,020	1,556	1,103	—	1,732	—
5,380	5,380	—	5,380	1,661	1,192	—	1,850	—
6,910	6,910	—	6,910	2,139	1,297	—	2,079	—
7,400	7,400	—	7,400	2,284	1,402	—	2,221	—
8,350	—	—	8,350	2,565	—	—	2,493	—
9,000	—	—	9,000	2,754	—	—	2,677	—
8,410	8,410	—	8,410	2,596	1,577	—	2,463	—
9,490	—	—	9,490	2,914	—	—	2,765	—
10,220	—	—	10,220	3,129	—	—	2,969	—
2,730	2,730	—	2,730	853	514	—	909	—
3,090	3,090	—	3,090	962	595	—	1,025	—
3,450	3,450	—	3,450	1,069	675	—	1,140	—
2,730	2,730	—	2,730	853	547	—	1,038	—
3,090	3,090	—	3,090	962	633	—	1,169	—
3,450	3,450	—	3,450	1,069	718	—	1,300	—
5,380	5,380	—	5,380	1,661	1,029	—	1,650	—
5,020	5,020	—	5,020	1,556	952	—	1,545	—
9,420	9,420	—	9,420	2,908	1,763	—	2,749	—
3,230	3,230	—	3,230	1,008	602	—	1,052	—
4,080	4,080	—	4,080	1,264	791	—	1,318	—
3,660	3,660	—	3,660	1,137	697	—	1,185	—
4,370	4,370	—	4,370	1,350	854	—	1,408	—
5,380	5,380	—	5,380	1,661	1,040	—	1,693	—
—	6,360	—	6,360	1,951	1,252	—	2,364	—
—	5,760	—	5,760	1,773	1,122	—	2,148	—
—	6,680	—	6,530	2,287	1,498	—	2,400	—
5,020	5,020	—	5,020	1,556	963	—	1,585	—
—	7,400	—	7,400	2,596	1,402	—	2,433	—
6,910	6,910	—	6,910	2,139	1,297	—	2,079	—
8,350	—	—	8,350	2,565	—	—	2,493	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
13 ³ / ₈	P-110+	86.00	12.125	11.969	—	—	—	4,780
	Q-125+	72.00	12.347	12.191	—	—	—	2,880
	Q-125+	80.70	12.215	12.059	—	—	—	4,140
	Q-125+	86.00	12.125	11.969	—	—	—	5,030
	S-95	72.00	12.347	12.191	—	—	—	3,470
	S-95+	68.00	12.415	12.259	—	—	—	2,910
	S-95+	80.70	12.215	12.059	—	—	—	4,990
	S-95+	86.00	12.125	11.969	—	—	—	6,240
	T-95	68.00	12.415	12.259	—	—	—	2,330
	T-95	72.00	12.347	12.191	—	—	—	2,820
	V-150*	72.00	12.347	12.191	14.375	—	—	2,880
	13 ¹ / ₂	H2S-90	81.40	12.340	—	—	—	—
H2S-95		81.40	12.340	—	—	—	—	4,860
HCP-110+		81.40	12.340	—	—	—	—	4,860
HCQ-125+		81.40	12.340	—	—	—	—	4,860
P-110+		81.40	12.340	—	—	—	—	3,910
Q-125+		81.40	12.340	—	—	—	—	4,030
S-95+		81.40	12.340	—	—	—	—	4,860
13 ⁵ / ₈	H2S-90+	88.20	12.375	—	—	—	—	5,930
	H2S-95+	88.20	12.375	—	—	—	—	5,930
	HCP-110+	88.20	12.375	—	—	—	—	5,930
	HCQ-125+	88.20	12.375	—	—	—	—	5,930
	P-110+	88.20	12.375	—	—	—	—	4,570
	Q-125+	88.20	12.375	—	—	—	—	4,800
	S-95+	88.20	12.375	—	—	—	—	5,930
16	C-75*	109.00	14.688	14.500	17.000	—	—	2,980
	F-25*	55.00	15.376	15.188	17.000	—	—	290
	H-40	65.00	15.250	15.062	17.000	—	—	670
	HCN-80+	84.00	15.010	14.822	—	—	—	1,910
	HCN-80+	95.00	14.868	—	—	—	—	2,580
	HCN-80+	97.00	14.850	—	—	—	—	2,990
	HCP-110+	84.00	15.010	14.822	—	—	—	1,910
	HCP-110+	95.00	14.868	—	—	—	—	2,580
	HCP-110+	97.00	14.850	—	—	—	—	2,990
	HCQ-125+	84.00	15.010	14.822	—	—	—	1,910
	HCQ-125+	95.00	14.868	—	—	—	—	2,580
	HCQ-125+	97.00	14.850	—	—	—	—	2,990
	J-55	75.00	15.124	14.936	17.000	—	—	1,020
	J-55	84.00	15.010	14.822	17.000	—	—	1,410
	J-55	109.00	14.688	14.500	—	—	—	2,560
	J-55	118.00	14.570	14.382	—	—	—	3,170
	K-55	75.00	15.124	14.936	17.000	—	—	1,020
	K-55	84.00	15.010	14.822	17.000	—	—	1,410
	K-55	118.00	14.570	14.382	—	—	—	3,170
	K-55*	109.00	14.688	14.500	17.000	—	—	2,560
	LS-65+	75.00	15.124	14.936	—	—	—	1,020
	LS-65+	84.00	15.010	14.822	—	—	—	1,470
	N-80	118.00	14.570	14.382	—	—	—	3,680
	N-80*	109.00	14.688	14.500	17.000	—	—	3,080
N-80 ^a	84.00	15.010	14.822	—	—	—	1,480	
N-80 ^a	95.00	14.868	—	—	—	—	2,180	

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
9,000	—	—	9,000	2,754	—	—	2,677	—
8,410	8,410	—	8,410	2,596	1,577	—	2,463	—
9,490	—	—	9,490	2,914	—	—	2,765	—
10,220	—	—	10,220	3,129	—	—	2,969	—
6,390	6,390	—	6,390	1,973	1,215	—	1,935	—
5,970	5,970	—	5,970	1,847	1,125	—	1,812	—
7,210	—	—	7,210	2,215	—	—	2,173	—
7,770	—	—	7,770	2,378	—	—	2,333	—
5,970	5,970	—	5,970	1,847	1,114	—	1,772	—
6,390	6,390	—	6,390	1,973	1,204	—	1,893	—
—	10,090	—	10,090	3,323	1,887	—	2,976	—
6,770	—	—	6,770	2,119	—	—	1,862	—
7,140	—	—	7,140	2,236	—	—	1,905	—
8,270	—	—	8,270	2,590	—	—	2,235	—
9,400	—	—	9,400	2,943	—	—	2,479	—
8,270	—	—	8,270	2,590	—	—	2,235	—
9,400	—	—	9,400	2,943	—	—	2,479	—
7,140	—	—	7,140	2,236	—	—	1,948	—
7,220	—	—	7,220	2,297	—	—	1,801	—
7,630	—	—	7,630	2,425	—	—	1,843	—
8,830	—	—	8,830	2,808	—	—	2,163	—
10,030	—	—	10,030	3,191	—	—	2,399	—
8,830	—	—	8,830	2,808	—	—	2,163	—
10,030	—	—	10,030	3,191	—	—	2,399	—
7,630	—	—	7,630	2,425	—	—	1,885	—
—	5,380	—	—	2,372	1,499	—	—	—
—	850	—	—	384	258	—	—	—
1,640	1,640	—	—	736	439	—	—	—
4,330	4,330	—	4,330	1,929	1,342	—	1,898	—
4,950	—	—	4,950	2,196	—	—	2,161	—
5,030	—	—	5,030	2,230	—	—	2,194	—
5,960	5,960	—	5,960	2,652	1,575	—	2,518	—
6,810	—	—	6,810	3,019	—	—	2,866	—
6,920	—	—	6,920	3,067	—	—	2,910	—
6,770	6,770	—	6,770	3,014	1,773	—	2,809	—
7,740	—	—	7,740	3,431	—	—	3,198	—
7,860	—	—	7,860	3,485	—	—	3,246	—
2,630	2,630	—	2,630	1,178	710	—	1,200	—
2,980	2,980	—	2,980	1,326	817	—	1,351	—
3,950	3,950	—	3,950	1,739	1,116	—	1,772	—
4,300	4,300	—	4,300	1,889	1,224	—	1,924	—
2,630	2,630	—	2,630	1,178	752	—	1,331	—
2,980	2,980	—	2,980	1,326	865	—	1,499	—
4,300	4,300	—	4,300	1,889	1,296	—	2,131	—
—	3,950	—	3,950	1,739	1,181	—	1,962	—
3,110	3,110	—	3,110	1,392	832	—	1,394	—
3,520	3,520	—	3,520	1,567	957	—	1,570	—
6,260	6,260	—	6,260	2,747	1,741	—	2,703	—
—	5,740	—	—	2,530	1,594	—	—	—
4,330	4,330	—	4,330	1,929	1,167	—	1,898	—
4,950	—	—	4,950	2,196	—	—	2,161	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE
DIMENSIONS AND

Size O.D. In.	Grade	Wt. Per Ft. With Cplg., Lb.	Inside Dia. In.	Thread & Cplg.		Extreme Line		** Col'pse Resis- tance PSI
				Drift Dia. In.	O.D. of Cplg. In.	Drift Dia. In.	O.D. of Box In.	
16	N-80+	97.00	14.850	—	—	—	—	2,270
	P-110+	84.00	15.010	14.822	—	—	—	1,480
	P-110+	95.00	14.868	—	—	—	—	2,230
	P-110+	97.00	14.850	—	—	—	—	2,340
	Q-125+	84.00	15.010	14.822	—	—	—	1,480
	Q-125+	95.00	14.868	—	—	—	—	2,230
	Q-125+	97.00	14.850	—	—	—	—	2,340
18 ^{5/8}	H-40	87.50	17.755	17.567	19.625	—	—	630
	H-40	106.00	17.563	17.375	—	—	—	1,140
	H-40	117.50	17.439	17.251	—	—	—	1,500
	H-40+	94.50	17.689	17.501	—	—	—	780
	J-55	87.50	17.755	17.567	19.625	—	—	630
	J-55	106.00	17.563	17.375	—	—	—	1,140
	J-55	117.50	17.439	17.251	—	—	—	1,510
	J-55+	94.50	17.689	17.501	—	—	—	780
	K-55	87.50	17.755	17.567	19.625	—	—	630
	K-55	94.50	17.689	17.501	—	—	—	780
	K-55	106.00	17.563	17.375	—	—	—	1,140
	K-55	117.50	17.439	17.251	—	—	—	1,510
	N-80	87.50	17.755	17.567	—	—	—	630
	N-80	94.50	17.689	17.501	—	—	—	780
	N-80	106.00	17.563	17.375	—	—	—	1,150
N-80	117.50	17.439	17.251	—	—	—	1,620	
20	F-25*	94.00	19.124	18.936	21.000	—	—	410
	H-40	94.00	19.124	18.936	21.000	—	—	520
	J-55	94.00	19.124	18.936	21.000	—	—	520
	J-55	106.50	19.000	18.812	21.000	—	—	770
	J-55	133.00	18.730	18.542	21.000	—	—	1,500
	K-55	94.00	19.124	18.936	21.000	—	—	520
	K-55	106.50	19.000	18.812	21.000	—	—	770
	K-55	133.00	18.730	18.542	21.000	—	—	1,500
	K-55	169.00	18.376	18.188	—	—	—	2,500
	L-80	169.00	18.376	18.188	—	—	—	3,020
	N-80	106.50	19.000	18.812	—	—	—	770
	N-80	133.00	18.730	18.542	—	—	—	1,600

*Non API Standard. Shown for information only.

†Lone Star Pipe Data

** Collapse, Internal Yield and Joint Yield Strengths are minimum values with no safety factor, reproduced by permission from API Bul. 5C2, Bulletin on Performance Properties of Casing and Tubing.

NO. 203

STRENGTHS OF CASING

Internal Yield Pressure PSI**				** Body Yield Stgth. 1,000 Lbs.	Joint Strength - 1000 Lbs.**			
Plain End or Ext. Line	Round Thread		But- tress Thd.		Threaded & Cplg. Joint			Ext. Line Joint
	Short	Long			Round Thread		But- tress Thd.	
					Short	Long		
5,030	—	—	5,030	2,230	—	—	2,194	—
5,960	5,960	—	5,960	2,652	1,575	—	2,518	—
6,810	—	—	6,810	3,019	—	—	2,866	—
6,920	—	—	6,920	3,067	—	—	2,910	—
6,770	6,770	—	6,770	3,014	1,773	—	2,809	—
7,740	—	—	7,740	3,431	—	—	3,198	—
7,860	—	—	7,860	3,485	—	—	3,246	—
1,630	1,630	—	—	994	559	—	—	—
2,000	2,000	—	2,000	1,208	703	—	1,206	—
2,230	2,230	—	2,230	1,344	795	—	1,342	—
1,760	1,760	—	1,760	1,068	609	—	1,067	—
2,250	2,250	—	—	1,367	754	—	1,329	—
2,740	2,740	—	2,740	1,661	948	—	1,613	—
3,060	3,060	—	3,060	1,849	1,072	—	1,795	—
2,420	2,420	—	2,420	1,469	821	—	1,427	—
2,250	2,250	—	—	1,367	794	—	1,427	—
2,420	2,420	—	2,420	1,469	865	—	1,533	—
2,740	2,740	—	2,740	1,661	998	—	1,733	—
3,060	3,060	—	3,060	1,849	1,129	—	1,929	—
3,270	3,270	—	3,270	1,990	1,079	—	1,887	—
3,520	3,520	—	3,520	2,137	1,174	—	2,027	—
3,990	3,990	—	3,990	2,416	1,356	—	2,292	—
4,460	4,460	—	4,460	2,689	1,534	—	2,551	—
—	960	—	—	673	359	—	—	—
1,530	1,530	—	—	1,077	581	—	—	—
2,110	2,110	2,110	—	1,480	784	907	1,402	—
2,410	2,410	2,410	—	1,685	913	1,057	1,596	—
3,060	3,060	3,060	—	2,125	1,192	1,380	2,012	—
2,110	2,110	2,110	—	1,480	824	955	1,479	—
2,410	2,410	2,410	—	1,685	960	1,113	1,683	—
3,060	3,060	3,060	—	2,125	1,253	1,453	2,123	—
3,910	3,230	3,430	3,380	2,692	1,402	1,732	2,689	—
5,680	4,690	4,990	4,920	3,916	2,202	2,549	3,610	—
3,500	3,500	3,500	3,500	2,450	1,307	1,514	2,281	—
4,450	4,450	4,450	4,450	3,091	1,707	1,976	2,877	—

† Hydril TS

‡ Hydril Super FJ-P

†† Hydril FJ-P

‡‡ Hydril Super EU

TABLE 204

STRETCH DATA FOR DRILL PIPE, TUBING AND CASING

Size of Tubing, D.P. or Casing	Stretch Per Length of Pipe Suspended in Well, Feet	Pull Above 1000 Lb. Pull Above Wt. of Pipe, Inches Factor C	Stretch Weight of Pipe Per In. Stretch of Pipe Pounds	Due To Own Weight Suspended in Water, Inches
2.375" Upset Tubing 4.70#/Ft.	500	.115	6,450	.14
	1,000	.310	3,225	.56
	2,000	.620	1,612	2.22
	3,000	.930	1,075	5.00
	4,000	1.240	806	8.88
	5,000	1.550	644	13.88
	10,000	3.100	322	55.51
2.875" Upset Tubing 6.50#/Ft.	500	.110	9,080	.14
	1,000	.220	4,540	.56
	2,000	.440	2,270	2.22
	3,000	.660	1,513	5.00
	4,000	.880	1,135	8.88
	5,000	1.100	908	13.88
	10,000	2.200	454	55.51
3.500" Upset Tubing 9.30#/Ft.	500	.0772	12,960	.14
	1,000	.1544	6,480	.56
	2,000	.3088	3,240	2.22
	3,000	.4632	2,160	5.00
	4,000	.6176	1,620	8.88
	5,000	.7720	1,296	13.88
	10,000	1.544	648	55.51
2.875" Drill Pipe 10.40#/Ft.	500	.070	14,300	.14
	1,000	.140	7,150	.56
	2,000	.280	3,575	2.22
	3,000	.420	2,383	5.00
	4,000	.560	1,787	8.88
	5,000	.700	1,430	13.88
	10,000	1.40	715	55.51

FORMULA FOR DETERMINING STRETCH IN PIPE

$$S = \frac{L \times P \times C}{1000 \times 1000}$$

(use to set tension packer with no weight indication)

FORMULA FOR DETERMINING PULL OF PIPE

$$P = \frac{1000 \times 1000 \times S}{C \times L}$$

FORMULA FOR FREE PIPE DEPTH

$$L = \frac{S \times 1000 \times 1000}{P \times C}$$

Where: L = Length of free pipe in feet.
 S = Stretch pulled in pipe, in inches.
 P = Pull on pipe to get the stretch "S" in pounds
 C = Constant for given pipe size and weight being stretched.
 (For this equation use C factor at pipe length of 1000 ft.)

TABLE 204

STRETCH DATA FOR DRILL PIPE, TUBING AND CASING

Size of Tubing, D.P. or Casing	Stretch Per Length of Pipe Suspended in Well, Feet	Pull Above 1000 Lb. Pull Above Wt. of Pipe, Inches Factor C	Stretch Weight of Pipe Per In. Stretch of Pipe Pounds	Due To Own Weight Suspended in Water, Inches
3.500" Drill Pipe 13.30 #/Ft.	500	.055	18,200	.14
	1,000	.110	9,100	.56
	2,000	.220	4,550	2.22
	3,000	.330	3,033	5.00
	4,000	.440	2,275	8.88
	5,000	.550	1,820	13.88
	10,000	1.10	910	55.51
4.500" Drill Pipe 16.60 #/Ft.	500	.0450	22,200	.14
	1,000	.0900	11,100	.56
	2,000	.180	5,550	2.22
	3,000	.270	3,700	5.00
	4,000	.360	2,775	8.88
	5,000	.450	2,220	13.88
	10,000	.900	1,110	55.51
5.500" Casing 17 #/Ft.	500	.0402	24,800	.14
	1,000	.0804	12,400	.56
	2,000	.160	6,230	2.22
	3,000	.240	4,133	5.00
	4,000	.320	3,100	8.88
	5,000	.402	2,480	13.88
	10,000	.804	1,240	55.51
7.000" Casing 23 #/Ft.	500	.0301	33,220	.14
	1,000	.0602	16,610	.56
	2,000	.120	8,305	2.22
	3,000	.181	5,537	5.00
	4,000	.241	4,152	8.88
	5,000	.301	3,322	13.88
	10,000	.602	1,661	55.51

NOTE: The above figures apply only to steel pipe that has not been stretched or is not being stretched beyond its elastic limit.

Example:

A 7" RTTS is set at 15,000 feet on 2 3/8" 4.7 #/ft. EUE tubing. There are indications that the casing has collapsed above the tool. Pick up pipe weight, mark pipe and pull 20,000 pounds above pipe weight. This 20,000 pounds stretches pipe 25 inches. Where is the casing collapsed?

S = 25 inches

P = 20,000 pounds

C = .31 (C factor from table at 1000 ft.)

$$L = \frac{25 \times 1000 \times 1000}{20,000 \times .31}$$

L = 4032 feet

TABLE 205

SLACK-OFF DATA FOR TUBING AND DRILL PIPE

Size of Tubing or Drill Pipe	Slack-Off Factor*
1.900 O.D. EUE Tubing	0.68
2.375 O.D. EUE Tubing	0.39
2.875 O.D. EUE Tubing	0.26
3.500 O.D. EUE Tubing	0.17
2.875 O.D. 10.40 lb/ft DP	0.16
3.500 O.D. 13.30 lb/ft DP	0.12
4.500 O.D. 16.60 lb/ft DP	0.10

* Inches to slack-off to obtain 1000 lbs. weight on packer for each 1000 ft. of depth. An allowance is included for coiling and friction.

$$\text{Required slack (inc.)} = \frac{\text{Desired Weight}}{1000} \times \frac{\text{Packer Depth}}{1000} \times \text{Factor}$$

Example:

Weight desired on packer 15,000 lbs.
 Depth packer set 5,000"
 Size of Tubing 2.375" EUE
 Slack-off factor for 2.375" EUE from table = 0.39

$$\frac{15,000}{1000} \times \frac{5,000}{1000} \times 0.39 = 29.25 \text{ (use 29 inches)}$$

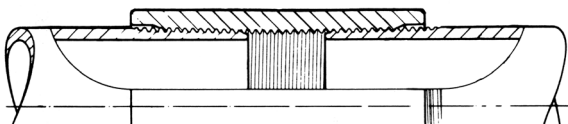
The setting stroke required to set any particular tool is not included in these figures and will have to be added.

NOTE: The above figures apply only to pipe that has not been stretched, or is not being stretched beyond its elastic limit.

TUBING

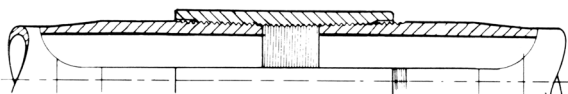
API Non-Upset Tubing

Sizes: 1.050" - 4 1/2"



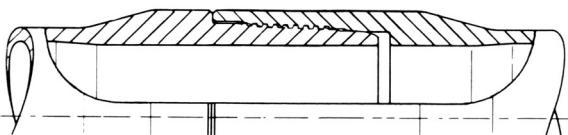
API External Upset Tubing

Sizes: 1.050" - 4 1/2"



Extreme-Line Tubing

Sizes: 2 3/8" - 3 1/2"

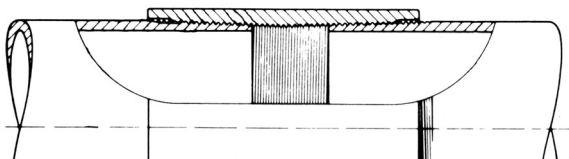


CASING

API SHORT OR LONG

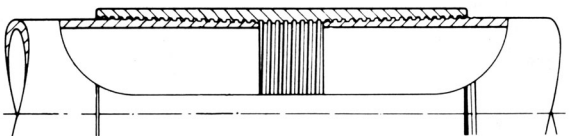
Round-Thread Casing

Sizes: $4\frac{1}{2}$ " - 20"
($2\frac{1}{2}$ " and $24\frac{1}{2}$ ")



API Buttress-Thread Casing

Sizes: $4\frac{1}{2}$ " - 20"



API Extreme-Line Casing

Sizes: 5" - $10\frac{3}{4}$ "

