Table 3:-

MAXIMUM ALLOWABLE STRESS VALUES IN TENSION FOR ANNEALED TITANIUM ALLOYS*

Form and Spec. No.		Specified Tensile Strength, Ksi	Min. Yield Offset Ksi	Notes	For Metal Temperature not Exceeding °F 100	150	200	250	300	350	400	450	500	550	600
Sheet Strip Plate SB-265 Bar Billet SB-348 Forgings SB-381	Grade 1	35.0	25.0	...	8.8	8.1	7.3	6.5	5.8	5.2	4.8	4.5	4.1	3.6	3.1
	2	50.0	40.0	...	12.5	12.0	10.9	9.9	9.0	8.4	7.7	7.2	6.6	6.2	5.7
	3	65.0	55.0	...	16.3	15.6	14.3	13.0	11.7	10.4	9.3	8.3	7.5	6.7	6.0
	7	50.0	40.0	...	12.5	12.0	10.9	9.9	9.0	8.4	7.7	7.2	6.6	6.2	5.7
	12	70.0	50.0	(3)	17.5	17.5	16.4	15.2	14.2	13.3	12.5	11.9	11.4	---	---
Pipe SB-337 Seamless and Tubing SB-338 Welded	Grade 1	35.0	25.0	...	8.8	8.1	7.3	6.5	5.8	5.2	4.8	4.5	4.1	3.6	3.1
	2	50.0	40.0	...	12.5	12.0	10.9	9.9	9.0	8.4	7.7	7.2	6.6	6.2	5.7
	3	65.0	55.0	...	16.3	15.6	14.3	13.0	11.7	10.4	9.3	8.3	7.5	6.7	6.0
	7	50.0	40.0	...	12.5	12.0	10.9	9.9	9.0	8.4	7.7	7.2	6.6	6.2	5.7
	12	70.0	50.0	(3)	17.5	17.5	16.4	15.2	14.2	13.3	12.5	11.9	11.4	---	---
	Grade 1	35.0	25.0	(1) (2)	7.5	6.9	6.2	5.5	4.9	4.4	4.1	3.8	3.5	3.1	2.6
	2	50.0	40.0	(1) (2)	10.6	10.2	9.3	8.4	7.7	7.1	6.5	6.1	5.6	5.3	4.8
	3	65.0	55.0	(1) (2)	13.9	13.3	12.2	11.1	10.0	8.8	7.9	7.1	6.4	5.7	5.1
	7	50.0	40.0	(1) (2)	10.6	10.2	9.3	8.4	7.7	7.1	6.5	6.1	5.6	5.3	4.8
	12	70.0	50.0	(1) (2) (3)	14.8	14.8	13.9	12.9	12.0	11.3	10.6	10.1	9.6	---	---

NOTES. (1) 85% joint efficiency has been used in determining the allowable stress values for welded pipe and tube [see UG-31 (a)].

(2) Filler metal shall not be used in the manufacture of welded tubing or pipe.

(3) Code approved Summer 1979.

* From Table UNF-23.4 ASME Boiler and Pressure Vessel Code, Section VIII-Division 1.

Table 4:- Pipe Wall Thicknesses for Grade 2 Titanium

	Pipe wall thickness mm				
Pipe N.B. ins	Class 200 90/10 Cu-Ni	Gr 2 Ti Calculated*	Gr 2 Ti Sched 5s	Gr 2 Ti Sched 10s	Gr 2 Ti Sub Sched 5
2	2.1	.5	1.6	2.8	1.2
3	2.4	.7	2.1	3.1	1.6
6	3.4	1.3	2.8	3.4	2.0
12	6.4	2.6	4.0	4.6	3.0

* Calculated per ASME Code for service at 200 p.s.i. at 38°C
Schedule 5 and 10 wall thicknesses per ASME B337
Sub Schedule 5 suggested for seawater service at 200 p.s.i at 38°C max.

Table 5:- Weight Savings Achieved When Thin-Wall Titanium Piping Replaces Class 200 90/10 Copper Nickel Piping

Pipe N.B. ins	Weight of Class 200 Pipe kg/m	% Weight Savings Sched 5 Ti	Sub Sched 5 Ti
2	345	60	70
3	586	56	72
6	1577	59	71
12	5825	69	78