AMERITUBE

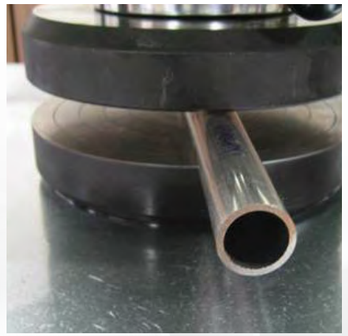
Seamless Tubing

AMERITUBE.NET

ABOUT US

Ameritube is dedicated to producing a viable and sustainable domestic manufacturing and distribution business that is a dependable supplier to you. Ameritube takes two things very seriously, quality and competitive pricing. Our goal is to find a hybrid model that drives value for our customers by providing domestic products and services combined with overseas raw material inputs. Our employees, managers, shareholders and stakeholders depend on it.

Founded in 2004, Ameritube grew out of the problems and risks with the overextended international supply chain. Experienced engineers and business professionals with firsthand knowledge of supply chains in the Automotive industry, realized that the costs of mitigating risks from supply chain failures, ensuring consistent supply, and managing fluctuations in demand was costing more than the benefit of lower labor costs overseas. Ameritube was founded under the principles of creating a customized link in the supply chain that could respond to changes in demand patterns by maintaining some flexible inventory domestically and custom manufacturing for end users. This three part hybrid of international sourcing, domestic custom manufacturing, and domestic distribution is the cornerstone of a strategy borne out of a deep understanding of creating successful supply chains. The marketplace response to this strategy has been tremendous as Ameritube continues to develop domestic capabilities to grow our business into the future.



AMERITUBE EQUIPMENT INCLUDES

- CONTINUOUS CASTING FURNACE
- DIRECT CHILL SEMI-CONTINUOUS CASTING
- VERTICAL PRESS, PIERCER, BILLET HEATER
- TWO 5 STRAND, ONE 3 STRAND DRAW BENCHES
- OVER 80,000SQFT OF MFG. SPACE 11 ACRES OF LAND
- 2 STRAND PILGER MILL
- 60FT ANNEALING FURNACE
- ATMOSPHERE GENERATOR
- FINISHING DEPARTMENT, STRAIGHTENING, EDDY CURRENT TESTING, HYDROSTATIC TESTING, AIR UNDERWATER TESTING, CUTTING, DEBURNING AND POLISHING EQUIPMENT
- FULL LAB INCLUDING TENSILE, YIELD, MICROSTRUCTURE, CHEMISTRY, HARDNESS AND OTHER TESTING
- 3000MT ANNUAL CAPACITY

WE DELIVER RESULTS
CUSTOM MANUFACTURING
QUICK DELIVERIES
CUSTOM SIZES
STOCKING PROGRAMS
BLANKET ORDERS
DRAWING TUBES UP TO 100FT

INDUSTRIES SERVED


HVAC


Transportation


Power & Nuclear


Oil & Gas


Offshore & Marine


Desalination


Defense


Chemical

APPLICATIONS

- Pump Barrels
- Chillers
- Compressors
- Process Piping
- Dryers
- Oilers
- Hydraulic Tubing
- Radiators
- Oils Coolers
- Industry Equipment
- Machinery
- Evaporators
- Heat Exchangers
- Condensers
- Pressure Vessels
- Feedwater Heaters

Copper Alloy Grade Chart

Alloy Group	Alloy UNS No.*	Chemical Analysis %									Density		Temper**	Tensile Rm (min)		Yield Rp 0.2%	
		Cu	Fe	Pb	As	Sn(1)	Zn	Mn	Ni(2)	Other	g/cm3	lb/in3		ksi	MPa	ksi	MPa
Copper Alloys	DHP Copper C12200	99.9 min								P .015-.040	8.94	0.323	ANN	36	250	30	205
	Red Brass C23000	84.0-86.0	.05	.05							8.75	0.316	ANN	40	275	12	85
	Admiralty brass C44300	70.0-73.0	.06	.07	.02-.06	.8-1.2	Rem.				8.53	0.308	ANN	45	310	15	105
	C68700	76.0-79.0	.06	.07	.02-.06		Rem.			Al 1.8-2.5	8.33	0.301	ANN	50	345	18	125
	C72200	Rem.	.50-1.0	.05			1.0	1.0	15.0-18.0		8.94	0.323	ANN	45	310	16	110
	Copper Nickel 90/10 C70600	Rem.	1.0-1.8	.05			1.0	.07	9.0-11.0		8.94	0.323	ANN	40	275	15	105
	Copper Nickel 70/30 C71500	Rem.	.40-1.0	.05			1.0	1.0	29.0-33.0		8.94	0.323	ANN	52	360	18	125

* Specialty Copper Alloys are available upon request.
** Hard drawn and light drawn tempers also available.

Seamless Pressure Tubing Range of Sizes

Standard size range

Available by Custom Order

Outside Diameter		Minimum Wall																		
mm		0.71	0.89	1.2	1.5	1.7	1.8	2.1	2.4	2.7	2.8	3.0	3.4	3.8	4.0	4.2	4.8	5.2	5.6	6.4
	in.	0.028	0.035	0.049	0.060	0.065	0.072	0.083	0.095	0.105	0.109	0.120	0.134	0.150	0.156	0.165	0.180	0.203	0.219	0.250
6.35	0.250																			
9.53	0.375																			
12.7	0.500																			
15.9	0.625																			
19.1	0.750																			
22.2	0.875																			
25.4	1.000																			
31.8	1.250																			
38.1	1.500																			
41.3	1.625																			
42.2	1.660																			
44.5	1.750																			
48.3	1.900																			
50.8	2.000																			
57.2	2.250																			
60.3	2.375																			
63.5	2.500																			
69.9	2.750																			
73.0	2.875																			
76.2	3.000																			

For sizes not shown on this chart, please inquire about availability.

Supercritical Tubing Grade Chart

Alloy Group	Alloy UNS No*	WNR	Chemical Analysis %										Density		Temper**	Tensile Rm (min)		Yield Rp 0.2% (min)		Elong. % min	Hardness HV
			C	Mn	Ni	Cr	Fe	Mo	Ti	Nb	N	Other	g/cm³	lb/in³		ksi	MPa	ksi	MPa		
Stainless Steel	304L S30403	1.4036	0.035 max	2.0 max	8.0-11.0	18.0-20.0	bal						7.93	0.286	ANN	70	485	25	170	35	200 max
	316L S31603	1.4404 1.4435	0.035 max	2.0 max	10.0-13.0	16.0-18.0	bal	2.0-2.5 2.5-3					7.93	0.286	ANN	70	485	25	170	35	200 max
	347 S34700	1.4546	0.080 max	2.0 max	9.0-12.0	17.0-19.0	bal			10XC-1.00		-0.600	7.93	0.286	ANN	75	515	30	205	35	200 max
	Duplex S31803	1.4462	0.030 max	2.0 max	4.5-6.5	21.0-23.0	bal	2.5-3.5			0.08-0.20		7.8	0.281	ANN	90	620	65	450	25	290 max
	Super Duplex S32750	1.441	0.030 max	1.2 max	6.0-8.0	24.0-26.0	bal	3.0-5.0			0.24-0.32	Cu 0.5 max	7.79	0.28	ANN	116	800	80	550	15	310 max
	Super Duplex S32760	1.4501	0.020	1.0 max	6.0-8.0	24.0-26.0	bal	3.0-4.0			0.24-0.32	Cu 0.50 W 0.50	7.70	0.278	ANN	109	750	73.5	507	35	310 max
Nickel Alloys	Alloy 200 N02200	2.4065	0.15 max	0.4 max	99.0 min		0.4 max					Cu 0.25 max	8.9	0.321	ANN	75	515	15	105	33	150 max
	Alloy 276 N102276	2.4819	0.02 max	1.0 max	bal	14.5-16.5	4.0	15.0-17.0				W 3.0-4.5	8.9	0.321	ANN	100	690	41	283	40	210 max
	Alloy 400 N04400	2.4360	0.30 max	2.0 max	63.0-70.0		2.5 max					Cu bal	8.83	0.319	ANN	70	480	28	195	35	180 max
	Alloy 600 N06625	2.4816	0.15 max	1.0 max	72.0 min	14.0-17.0	6.0-10.0					Cu 0.50 max	8.42	0.304	ANN	80	550	35	240	30	300 max
	Alloy 625 N06625	2.4856	0.10 max	0.5 max	bal	20.0-23.0	5.0 max	8.0-10.0	0.40 max	3.15-4.15	0.40 max		8.44	0.305	ANN	120	827	60	414	30	260 max
	Alloy 800 N08800	1.4876	0.15 max	1.5 max	30.0-35.0	19.0-23.0	39.5 min		0.15-0.60		0.15-0.60	Cu 0.75 max	8	0.289	ANN	75	517	30	207	30	200 max
	Alloy 800H N08810	1.4876	0.05-0.10	1.5 max	30.0-35.0	19.0-23.0	39.5 min		0.15-0.60		0.15-0.60	Cu 0.75 max	8.08	0.292	ANN	75	517	30	207	30	200 max
	Alloy 800HT N08811	1.4876	0.06-0.10	1.5 max	30.0-35.0	19.0-23.0	39.5 min		0.15-0.60		0.15-0.60	Al + Ti 0.85-1.20	7.94	0.287	ANN	75	517	30	207	30	200 max
	Alloy 825 N08825	2.4858	0.05 max	1.0 max	38.0-46.0	19.5-23.5	bal	2.5-3.5	0.6-1.20		0.20 max	Cu 1.5-3.0	8.1	0.292	ANN	85	586	35	241	30	209 max

* Specialty Copper Alloys are available upon request.
** Hard drawn and light drawn tempers also available.

Product Value Chain

RAW MATERIAL SUPPLIER SELECTION
- CAPABILITIES
- AUDITS
- CERTIFICATIONS
- SAMPLE ANALYSIS
- POLITICAL AND FINANCIAL RISK ASSESSMENT
- TESTING AND PROCESS OVERSIGHT

65% OF COST

LOGISTICS
- FREIGHT FORWARDING
- SHIPPING
- PACKAGING AND HANDLING
- CUSTOMS BROKERAGE
- DUTY

5% OF COST

MANUFACTURING, FABRICATION AND PROCESSING
- CUSTOM MANUFACTURING
- DRAWING
- CUSTOM PROCESSING
- CUTTING
- QUALITY CERTIFICATION

15% OF COST

INVENTORY AND DISTRIBUTION
- INVENTORY CONTROL
- JUST IN TIME DELIVERIES
- SAFETY STOCK
- TESTING AND CERTIFICATION

10% OF COST

SALES AND CUSTOMER SUPPORT
- SALES CHANNELS
- TECHNICAL SUPPORT
- ENGINEERING SUPPORT
- ON SITE TESTING
- QUALITY CERTIFICATION

5% OF COST

Quality Assurance

All the processing from incoming material inspection to cold forming, annealing, and finishing is done utilizing pre-approved detailed work order system:
- Work order batch processing with heat control from incoming material to final shipping
- In process control of critical parameters
- Continuous recording and evaluation of critical parameters
- Performance, yield and throughput
- Scheduling and continuous feedback with daily progress reports

Supplier Quality

Ameritube has created a transparent quality system from casting crucible to the non-destructive testing of the tube. Employing audits, representatives and standard operating procedures, Ameritube ensures supplier adherence to critical parameters.

Tube Candidates

MECHANICAL AND PHYSICAL PROPERTIES OF VARIOUS HEAT EXCHANGER TUBE CANDIDATES, TYPICAL UNLESS OTHERWISE NOTED

	ADMIRALTY BRASS	ALUMINUM BRASS	90/10 CUNI	70/30 CUNI	AL6XN	SEA-CURE	TP439	TI-GRADE2	TP304/ TP316
PROPERTY	C4430	C6870			N08367	S44660			S30400/ S31600
TENSILE STRENGTH	53 KSI	60	50	50	100*	85*	60*	50*	75*
YIELD STRENGTH	22 KSI	27	15	25	45*	65*	30*	40*	30*
ELONGATION	60%	55%	35%	25%	30%	20%	20%	20%	35%
R.HARDNESS	RF 75	RB 50	RB 30	RB 20	RB 100**	RC 25**	RB 90**	RB 92**	RB 90**
MODE OF ELASTICITY	$16x10^6$ PSI	16.0	18.0	18.0	28.2	31.5	29	15.4	28.3
DENSITY	.308 LBS./IN.^{3}	.301	.323	.32	.29	.278	.28	.16	.29
THERMAL EXPANSION	$11.2x10^{-6}$ IN./IN./ DEGREE F	10.3	9.5	9.5	8.7	5.38	5.6	5.2	9.5
THERMAL CONDUCTIVITY	64 BTU/FT-HR-F	58	23	17	7.9	9.9	12.3	12.5	8.6
FATIGUE ENDURANCE	20 KSI	20	20	22	33	35	20	16	30

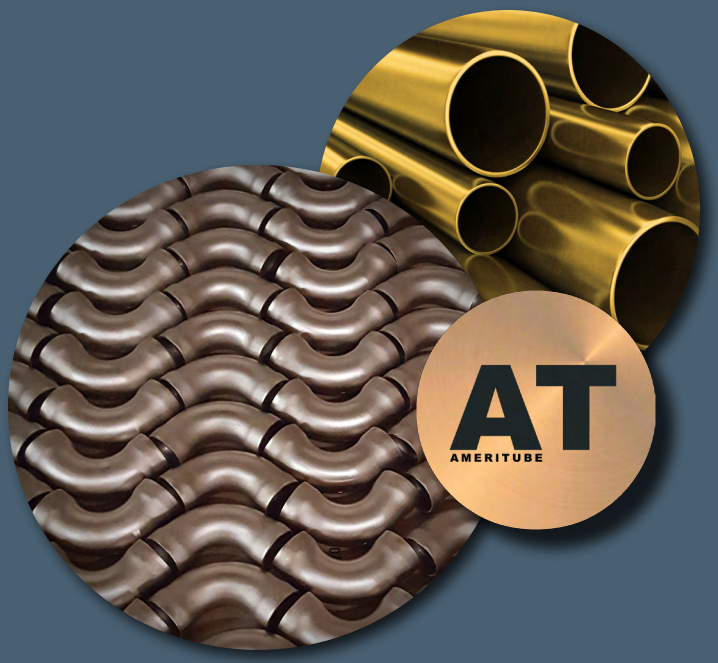
*MINIMUM ASTM VALUE **MAXIMUM ASTM VALUE

Quality Inspection

Inspection of the product in process by monitoring critical parameters, operational and process data established and determined by job travelers and work orders.

Quality Control

- Dimensional
- Eddycurrent Inspection (Level 2 Inspector in house)
- Hydrostatic Testing
- Pneumatic
- Ultrasound
- Tensile/Yield Strength
- Micrographic
- Ammonia Vapor/Mercury Nitride
- Flattening
- Expansion
- Positive Material Identification



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