

NF A49-217-87 STEEL TUBES SEAMLESS TUBES FOR HEAT EXCHANGERS

1. Chemical composition

Grade	Mfg. Process	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Others
TUZ12C13	S	0.15Max	1.00Max	1.00Max	0.040Max	0.030Max	0.50Max	11.50~13.50	-	-
TUZ10C17	S	0.12Max	1.00Max	1.00Max	0.040Max	0.030Max	0.50Max	16.00~18.00	-	-
TUZ2CN1810	S	0.030Max	1.00Max	2.00Max	0.040Max	0.030Max	9.00~12.00	17.00~20.00	-	-
TUZ2CN1810AZ	S	0.030Max	1.00Max	2.00Max	0.040Max	0.030Max	9.00~11.00	17.00~20.00	-	N 0.10~0.20
TUZ3CN1809	S	0.080Max	2.00Max	1.00Max	0.040Max	0.030Max	8.00~11.00	17.00~20.00	-	-
TUZ1CNS1815	S	0.15Max	3.50~4.50	2.00Max	0.030Max	0.020Max	13.80~16.00	16.50~18.50	0.50Max	-
TUZ6CNT1810	S	0.080Max	1.00Max	2.00Max	0.040Max	0.030Max	9.00~12.00	17.00~20.00	-	Ti 5C~0.6
TUZ2CNNb2520	S	0.030Max	0.40Max	1.00Max	0.030Max	0.020Max	23.00~26.00	19.00~22.00	-	N6 0.25Max
TUZ2CND1712	S	0.030Max	1.00Max	2.00Max	0.040Max	0.030Max	10.50~13.00	16.00~18.00	2.00~2.40	-
TUZ2CND1814	S	0.030Max	1.00Max	2.00Max	0.020Max	0.015Max	13.00~16.00	17.00~18.50	2.20~3.00	-
TUZ2CND1712AZ	S	0.030Max	1.00Max	2.00Max	0.040Max	0.030Max	11.00~13.50	16.00~18.00	2.00~2.40	-
TUZ6CND1711	S	0.070Max	1.00Max	2.00Max	0.040Max	0.030Max	10.00~12.50	16.00~18.00	2.00~2.40	-
TUZ1CND2522AZ	S	0.020Max	1.00Max	1.50~2.00	0.020Max	0.015Max	21.50~23.00	24.50~26.00	1.90~2.40	N 0.10~0.15
TUZ2CNDU1716	S	0.030Max	1.00Max	1.00Max	0.040Max	0.030Max	15.00~17.00	16.50~28.50	5.00~6.00	Cu 2.50~3.50
TUZ1NCDU201806AZ	S	0.020Max	0.80Max	2.00Max	0.030Max	0.010Max	17.50~18.50	19.50~20.50	6.00~6.50	Cu 0.50~1.00
TUZ1NCDU252004	S	0.020Max	0.40Max	2.00Max	0.030Max	0.010Max	24.00~27.00	19.00~22.00	4.00~5.00	Cu 1.00~2.00
TUZ1NCDU312703	S	0.020Max	1.00Max	2.00Max	0.020Max	0.015Max	29.00~32.00	25.00~29.00	3.00~4.00	Cu 0.70~1.20
TUZ2CND18503	S	0.030Max	1.40~2.00	1.20~2.00	0.030Max	0.030Max	4.25~5.25	18.00~19.00	2.50~3.00	-
TUZ2CND220503	S	0.030Max	1.00Max	2.00Max	0.030Max	0.020Max	4.50~6.50	21.00~23.00	2.50~3.50	N 0.08~0.20
TUZ2CND250703	S	0.030Max	0.70Max	1.70Max	0.030Max	0.020Max	5.50~7.50	23.50~25.50	2.50~3.50	N 0.15~0.25
TUZ5CNDU210802	S	0.060Max	1.00Max	2.00Max	0.030Max	0.030Max	6.00~9.00	20.00~22.00	2.00~3.00	Cu 1.00~2.00

2. Mechanical Properties

Grade	Tensile Test MPa or N/mm ²		Remarks (Similar to JIS)
	Min Yield point	Tensile Strength	
TUZ12C13	210	420-670	Ferritic Stainless Steels
TUZ10C17	250	420-670	
TUZ2CN1810	175	470-720	
TUZ2CN1810AZ	240	500-800	Austenitic Stainless Steels
TUZ3CN1809	200	490-740	
TUZ1CNS1815	220	540-740	
TUZ6CNT1810	190	490-740	
TUZ2CNNb2520	215	490-690	
TUZ2CND1712	175	470-720	
TUZ2CND1814	210	490-690	
TUZ2CND1712AZ	280	600-800	
TUZ6CND1711	190	490-740	
TUZ1CND2522AZ	260	540-740	
TUZ2CNDU1716	255	590-790	
TUZ1NCDU201806AZ	300	650-850	
TUZ1NCDU252004	230	550-700	
TUZ1NCDU312703	210	500-750	
TUZ2CND18503	440	630-880	
TUZ2CND220503	450	680-880	
TUZ2CND250703	450	700-900	
TUZ5CNDU210802	380	635-835	