NF A49-323-78 STEEL TUBES JACKS FOR HYDRAULIC TRANSMISSIONS CLOD ROLLED OR COLD DRAWN SEAMLESS TUBES TYPE READY FOR USE

1. Chemical Composition

Grade	Mfg. Process	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Others
TU37b	S	0.18Max	0.35Max	0.75Max	0.04Max	0.040Max	-	-	-	-
TU52b	S	0.20Max	0.50Max	1.50Max	0.040Max	0.040Max	-	-	-	-
TU52BT	S	0.20Max	0.50Max	1.50Max	0.40Max	0.040Max	-	-	-	-
TU17 MV5	S	0.21Max	0.45Max	1.50Max	0.040Max	0.040Max	-	-	-	V 0.15Max

2. Mechanical Properties

Grade	Tensile Test MPa or N/mm^2		Remarks
	Min Yield point	Tensile Strength	(Similar to JIS)
TU37b	(Normalized)		Impact Test (℃,J/cm^2)
	240	360~480	-20, 35
TU52b	(Normalized)		-, -
	350	510~630	(STKM18)
TU52BT	(Normalized)		-20, 50
	350	510~630	-46, 35
TU17 MV5	(Normalized)		-20, 50
	410	510~630	

JIS Number and Corresponding Foreign Standards

JIS			ASTM			BS			DIN			NF			ISO			Index Number
Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	
G3445	STKM11A	C	A512	MT1010	C	1717	ERWC1	C	2391	St30Si	C				3304	R28	C	C017
			A513	MT1010	C					St30A1	C				3305	"	C	

									2393	St28	C				3306	"	C	
										RSt28	C							
									2394	St28	C							
										USt28	C							
										RSt28	C							
	STKM12A	C	A512	MT1015	C	1717	ERWC2	C	2391	St37-2					3304	R33	C	
			A513	MT1015	C	6323	HFS3	C		RSt37-2					3305	"	"	
	STKM12B	C	A512	MT1015	C				2394	St37-2					3306	"	"	
			A513	MT1015	C					Ust38-2								
			A519	MT1015	C					RSt-2								
	STKM12C	C				1717	CEWC2	C				A49-322	TU37b	C				
						"	CFSC3	C				A49-327	TU37b	C				
						6323	CFS3	C										
						"	CFS3A	C										
	STKM13A	C	A312	MT1020	C	1717	ERWC3	C	2391	St45	C	A49-324	TU37b	C	2937	TS4	C	
			A513	MT1020	C				2393	St44-2	C	A49-330	TU37b	C	3304	R37	"	
									2394	St44-2	C	A49-343	TU38b	C	3305	"	"	
	STKM13B	C	A513	MT1020	C										3306	"	"	
	STKM13C	C				1717	CEWC3	C										
						"	CFSC4	C										
						6323	CFS4	C										
	STKM14A	C	A513	MT1020	C	6323	HFS4	C							2937	TS9	C	
															3304	R42	"	
	STKM14B	C				6323	HFS5	C							3305	R42	C	
	STMK14C	C													3306	"	"	
	STKM15A	C	A513	1030	C													
			A519	1030	C													

	STKM15C																	
	STKM16A	C	A519	1040	C							A49-311	TUXC35	C				
												A49-312	TUXC35	C				
	STKM16C	C																
	STKM17A	C	A519	1050	C	6323	HFS8	C										
	STKM17C	C				6323	CFS8	C										
	STKM18A	C	A519	1518	C	1717	ERWC5	C				A49-310	TU52b	C				
												A49-311	TU52b	C				
												A49-312	TU52b	C				
	STKM18B	C										A49-321	TU52b	C				
												A49-323	TU52b	C				
												A49-326	TU52b	C				
	STKM18C	C										A49-330	TU52b	C				
												A49-341	TS42a	C				
												"	TS47a	C				
												A49-343	TS18M5	C				
	STKM19A	C	A519	1524	C				2391	ST52	C				2937	TS18	C	
									2393	ST52-3	C				2938	Gr.1	C	
									2394	ST52-3	C				3304	R50	C	
															3305	R50	C	
															3306	R50	C	
	STKM20A	C																