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Mechanical Test details		PROPERTY CLASS											
		8.8 & 8.8.3 ≤M 16 4)		8.8 & 8.8.3 ≤M 16 5)		9.8 4)		10.9		10.9.3		12.9	
		N/MM ²	KGF/MM ²	N/MM ²	KGF/MM ²	N/MM ²	KGF/MM ²	N/MM ²	KGF/MM ²	N/MM ²	KGF/MM ²	N/MM ²	KGF/MM ²
TENSILE STRENGTH 1)2), RM	NOM.	800	81.58	800	81.58	900	91.77	1000	101.97	1000	101.97	1200	122.36
	MIN.	800	81.58	800	84.64	930	94.83	1040	106.05	1040	1106.05	1240	126.44
VICKERS HARDNESS, HV	MIN.	250		255		290		320		320		385	
	MAX.	320		335		360		380		380		435	
BRINELL HARDNESS, HB	MIN.	238		242		276		304		304		366	
	MAX.	304		318		342		361		361		414	
ROCKWELL HARDNESS, HRB	MIN.	—		—		—		—		—		—	
	MAX.	—		—		—		—		—		—	
ROCKWELL HARDNESS, HRC	MIN.	22		23		28		32		32		39	
	MAX.	32		34		37		39		39		44	
SURFACE HARDNESS, HV	MAX.	7)											
LOWER YIELD STRESS 3)	NOM.	—		—		—		—		—		—	
	MIN.	—		—		—		—		—		—	
PROOF STRESS R _{PO2}	NOM.	640	65.26	640	65.26	720	73.42	900	91.77	900	91.77	1080	1110.13
	MIN.	640	65.26	660	67.30	720	73.42	940	95.85	940	95.85	1100	112.17
STRESS UNDER PROOFING LOAD S _p	S _p /R _p or S _p /R _{PO}	0.91		0.91		0.9		0.88		0.88		0.88	
	MIN.	580	59.14	600	61.18	650	66.28	830	84.64	830	84.64	970	98.91
ELONGATION AFTER FRACTURE, A	MIN.	12		12		10		9		9		8	
STRENGTH UNDER WEDGE LOADING	The Values For Full Bolts And Screws (not Studs) Shall Not Be Smaller Than The Minimum Values For Tensile Strength.												
IMPACT STRENGTH. J	MIN.	30		30		25		20		20		15	
HEAD SOUNDNESS	NO FRACTURE												
MIN. HEIGHT OF NON CARBURIZED THREAD ZONE, E	½ H1					2/3 H1				3/4 H1			
MAX DEPTH OF COMPLETE DECARBURIZATION, G	0.015												
<p>Minimum tensile properties apply to products of nominal length 1 > 2.5 d. Minimum hardness applies to products of length 1 < 2.5 d and other products which cannot be tensile tested (i.e due to head configuration)</p> <p>For testing of full size Bolts, Screw and Studs ,the loads given in Table . SP-003 T/4shall be applied.</p> <p>In cases where the lower yield stress R cannot be determined ,it is permissible to measure the proof stress R.</p> <p>For Bolts of property class 8.8 in diameter ,d < M 16 , there is an increased risk of nut stripping in the case of inadvertent over tightening including a load in excess of proofing load.</p> <p>For Structural bolting ,limit is M12.</p> <p>Applies only to nominal thread dia, d < M16</p> <p>Strtce hardness shall not be more than 30 Vickers point above the measured core hardness on the product when readings of both the surface and core are carnea out at HV 0.3 For property class 10.9 any in hardness at the surface which indicate the surface hardness exceeds 390 HV , is not accepted.</p>													