

BS 5242 PART1-75 TUBES FOR FLUID POWER CYLINDER BARRELS

Tubes for fluid power cylinder barrels

1. Scope

PART 1

Specification for steel tubes with specially finished surfaces, includes details of chemical composition mechanical properties, dimensional tolerances and surface texture of specially finished surfaces replaces BS PD 6477:1976

2. Chemical Composition

Grade	Mfg. Process	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Others
HP1	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	t 10mmMax 10<t 0.20Max 20<t 50Max
HP2	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	t 10mmMax 10<t 0.20Max 20<t 50Max
HP3	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.55Max	t 10mmMax 10<t 0.20Max 20<t 50Max
HP4	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	-
HP4	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	-
HP6	S, W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.55Max	-

$$EC \text{ (Carbon Equivalent)} = C + Mn/b + (Ni+Cu)/15 + (Cr+ Mo + V)/5$$

3. Mechanical Properties

Grade	Tensile Test MPa or N/mm ²		Remarks (Similar to JIS)
	Min Yield point	Tensile Strength	
HP1	235	360Min	(STC370)
	225		
	215		

