

# Material: BS 10216-5 EN 1.4435

## Standard Specification for Seamless Steel Tubes for Pressure Purposes

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** BS 10216-5 Seamless Steel Tubes for Pressure Purposes

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries Grade

**Belongs to the Industry:** Tube

Chemical Composition			Heat Treatment	
Carbon	C %	0.030 max.	Solution Annealing	
Silicon	Si %	1.000 max.		
Manganese	Mn %	2.000 max.		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.015 max.		
Chromium	Cr %	17.000 - 19.000		
Nickel	Ni %	12.500 - 15.000		
Molybdenum	Mo %	2.500 - 3.000		
Nitrogen	N %	0.110 max.		
Iron	Fe %	Balance		
-	-	-	<b>Mechanical Properties</b> Tensile Strength in Mpa 490 - 690 Yield Strength in Mpa 190 min. Elongation in % 30 min. Reduction of Area in % - Hardness in BHN - Impact in Joule 60 min. @ -196°C	
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.4436	EN	European Union	Steel
1.4436	DIN	Germany	Steel
X3CrNiMo17 13 3	UNI	Italy	Steel, Sheet, Plate and Strip
X3CrNiMo17 13 3	AFNOR NF	France	Steel
X3CrNiMo17 13 3	DIN	Germany	Sheet, Plate and Strip
316	SAE	USA	Steel, Wire, Bar, Shape and Forging
X2CrNiMo17 12 3	EN	European Union	Steel, Rod, Bar and Extrusion

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