



ASTM (American Society For Testing and Materials) -ASTM-A53, ASTM-A795 , ASTM-135 Under Schedule-10,20,30,40

ASTM- A53 SCHEDULE-40 Standard Specification for Pipe,Steel,Black HDG Coated Welded & Seamless				ASTM -A795 , SCHEDULE-10 Standard Specification for Black & HDG welded steel Pipes for Fire Protection Use				ASTM-A 795 , SCHEDULE-30 & 40 Standard Specification for Black & HDG welded steel Pipes for Fire Protection Use				ASTM A135 , SCHEDULE-10 Standard Specification for Electric- Resistance-Welded Steel Pipe			
S.No.	SIZE (INCH)	OD (MM)	Specified WT (MM)	SN	SIZE (INCH)	OD (MM)	Specified WT(MM)	S.N.	Size (IN)	OD (MM)	Specified WT(MM)	SN	Size(IN)	OD (MM)	Specified WT(MM)
1	1/2"	21.3(0.840)	2.77(0.109)	1	.....	.....	.....	1	1/2"	21.3	2.77	1	.....	.....	.....
2	3/4"	26.7(1.050)	2.87(0.113)	2	3/4"	26.70	2.11	2	3/4"	26.7	2.87	2	3/4"	26.7	2.11
3	1"	33.4(1.315)	3.38(0.133)	3	1"	33.40	2.77	3	1"	33.4	3.38	3	1"	33.4	2.77
4	1.1/4"	42.2(1.660)	3.56(0.140)	4	1.1/4"	42.20	2.77	4	1.1/4"	42.2	3.56	4	1.1/4"	42.2	2.77
5	1.1/2"	48.3(1.900)	3.68(0.145)	5	1.1/2"	48.30	2.77	5	1.1/2"	48.3	3.68	5	1.1/2"	48.3	2.77
6	2"	60.3(2.375)	3.91(0.154)	6	2"	60.30	2.77	6	2"	60.3	3.91	6	2"	60.3	2.77
7	2.1/2"	73(2.875)	5.16(0.203)	7	2.1/2"	73.00	3.05	7	2.1/2"	73	5.16	7	2.1/2"	73	3.05
8	3"	88.9(3.500)	5.49(0.216)	8	3"	88.90	3.05	8	3"	88.9	5.49	8	3"	88.9	3.05
9	3.1/2"	101.6(4.000)	5.74(0.226)	9	3.1/2"	101.60	3.05	9	3.1/2"	101.6	5.74	9	3.1/2"	101.6	3.05
10	4"	114.3(4.500)	6.02(0.237)	10	4"	114.30	3.05	10	4"	114.3	6.02	10	4"	114.3	3.05
11	5"	141.3(5.563)	6.55(0.258)	11	5"	141.30	3.40	11	5"	141.3	6.55	11	5"	141.3	3.40
12	6"	168.3(6.625)	7.11(0.280)	12	6"	168.30	3.40	12	6"	168.3	7.11	12	.....	.....	.....
13	8"	219.1(8.625)	8.18(0.322)	13	8"	219.10	4.78	13	8"	219.1	7.04	13	.....	.....	.....

ASTM Sch. 20 & 40 , Type-E (Mechanical & Chemical Properties)

	CRITERIA	C % Max	Mn % Max	P % Max	S % Max	Cu % Max	Ni % Max	Cr % Max	Mo % Max	V % Max	TS (Min)	YS (Min)	EL
1	GR.-A	0.250	0.950	0.050	0.045	0.400	0.400	0.400	0.150	0.080	330	205	.....
2	GR.-B	0.300	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	415	240	.....

ASTM-A135 SCH-10 PROPERTY , TYPE-E (Mechanical & Chemical Properties)

	CRITERIA	C % Max	Mn % Max	P % Max	S % Max	TS (Min)	YS (Min)	EL % Min (Long.)					
1	GR.-A	0.250	0.950	0.035	0.035	331	207	35					
2	GR.-B	0.300	1.200	0.035	0.035	414	241	30					

ASTM-A795 SCH-10,30,40 PROPERTY , TYPE-E (Mechanical & Chemical Properties)

	CRITERIA	C % Max	Mn % Max	P % Max	S % Max	TS (Min)	YS (Min)	EL % Min (Long.)					
1	GR.-A	0.250	0.950	0.035	0.035								
2	GR.-B	0.300	1.200	0.035	0.035								

1. Length -0/+50 MM or Mutual Agreement between Manufacturer and Purchaser

Wall Thickness The minimum wall thickness at any point shall be not more than 12.50 % under Specified wall thickness or
Calculate Minimum Permissible wall thickness from specified wall thickness-
 $Ts \times 0.875 = Tm$ (where - Ts- Specified thickness , Tm- Minimum Permissible wall thickness)

2. Out-of-Roundness CHS $\pm 2\%$ for hollow sections having diameter to thickness ratio not exceeding 100, otherwise shall be agree between APM and the purchaser

7. Straightness The Finished Pipes shall be reasonably straight

8. Mass(m) per unit length The mass of the pipe shall not vary more than $\pm 10\%$ from specified mass as given table X2.20 of A53

9. End

Plain end, Grooved end, Thread end, Bevel end. (Bevel end angle permissible 30 degree +5 degree, - 0 dgree)

Grooved end - as per Victaulic Specification -25.01

Thread end - as per NPT (National Pipe Thread Tapered)- Thread is 60 degree as per American National Standard Institute (ANSI) Standard
ASME-B1.20.01 : 2003

10. Flattening Test

for above NPS 2" - Welded tubes shall be flattened with the weld placed alternately at 0 deg. or 90 deg.
to the direction of the the force .

for Weld Test- Flatten up to 75 % of original Dia of the tubes result no cracks apperance on weld Portion

For Material other than weld - Flatten up to 60 % of original tube OD result no cracks appearance in the
metal other than in the weld portion

11. Leack Tightness Test

a.- Online NDT (Eddy Current) as per E213 or

b. - Hydro Testing at Specified Table X2.20 PSI (Size Wise & Grade Wise) Pressure and holding time Minimum 5 Second

12 . Bend Test

Bend Test is applicable for Specified Diameter (D) from 17.20 to 60.30 mm through corresponding radius

D	17.2	21.3	26.9	33.7	42.4	48.3	60.3	
Bending Radius	50	65	85	100	150	170	220	

13. Surface Protection

Bare Black Tube (Uncoated)

HDG - Galvanized As per B6 -The weight (Mass) per unit area of Zinc Coating shall be not less -550 g/m² (77 Micron)

Oil-Based Painted Tubes (OBPT)

Water-Base Painted Tube - Acid Removal (WBPTAR)

Water-Base Painted Tube - Non Acid Removal (WBPTNR)

14.Packing

Hexagonal Type or Customer Requirments

15. Colour Coading

For Light - Brown

For Medium - Blue

For Heavy - Red

16. Mill Test Certificate

We can issue a MTC, Certifying that the tubes supplied comply with this standard-ASTM A53 ,A135, A795 & Inspection

Documents as Per EN 10204 : 2004 ,Type 3.1