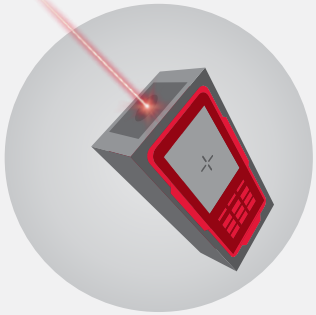
THE BEST STEEL STRUCTURES NEED THE BEST TOOLS

You make lots of decisions when designing and constructing a steel structure. Choose the tools that help you do your job in the best possible way.

FAST

FASTER

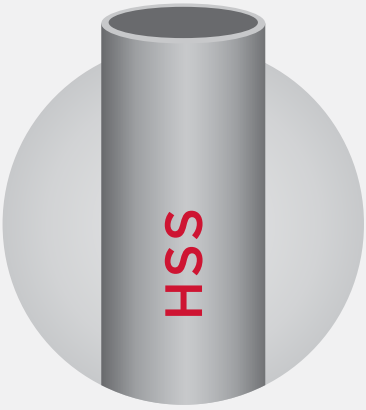
SMART



SMARTER

STRONG

ASTM A53 standard pipe is made for mechanical applications. Sure, it technically meets the code requirements for structural steel buildings, but only because it was typically the only option back when the code was originally developed. Times have changed!



STRONGER

ASTM A1085 and A500 Grade C hollow structural sections (HSS) are made for steel structures. With high yield and tensile strengths, HSS provide strong support for today's bridges, buildings and more. And HSS are readily available, so why design with any other material?

STEEL GRADE COMPARISON

	ASTM A53	ASTM A500	ASTM A1085
DESCRIPTION	Standard specification for pipe, steel, black and hot-dipped, zinc-coated, welded and seamless	Standard specification for cold-formed welded and seamless carbon steel structural tubing in rounds and shapes	Standard specification for cold-formed welded carbon steel hollow structural sections (HSS)
INTENDED USE	Mechanical and pressure applications; also acceptable for ordinary uses in steam, water, gas and air lines	Welded, riveted or bolted construction of bridges and buildings, and for general structural purposes	Welded or bolted construction of buildings, bridges, towers, cranes, sign supports and poles, off-shore production and drilling platforms, roll-over protective structures (ROPS), falling object protective structures (FOPS), and amusement rides
ADVANTAGES	—	Superior surface finish (bare — no mill lacquer coating applied); higher strength-to-weight ratio; readily available on a two- to three-week rolling cycle; specific lengths available from production: 18'–125'	All the advantages of A500, as well as standard requirement for Charpy V-notch toughness; no section property reduction factor required; ideal for use in structures subject to fatigue and seismic loading

TECHNICAL INFORMATION

SPECIFICATIONS	ASTM A53		ASTM A500	ASTM A1085
Strength Levels	**Types E and S, Grade A**	**Types E and S, Grade B**	**Grade C**	**Grade A**
Yield Strength	30,000 psi	35,000 psi	50,000 psi	50,000 psi min./70,000 psi max.
Tensile Strength Min.	48,000 psi	60,000 psi	62,000 psi	65,000 psi
Elongation % Min.	Varies	Varies	21	21
Lengths	Single random lengths (16'–24') or double random lengths (36'–46')		18'–125' (depending on the size and gauge)	18'–125' (depending on the size and gauge)
Tolerances	**All Grades**		**All Grades**	**Grade A**
Wall Thickness	- 12.5%		+/- 10%	+ 10%/- 5%
Chemistry	Higher C, Mn, P, S and residual elements that could impact weldability		Low C, Mn, P, S and residual elements for superior weldability in the shop or in the field	Low C, Mn, P, S and residual elements, along with a maximum permissible carbon equivalent of .45%, for superior weldability in the shop or in the field
Size Availability	18 different sizes available from 1.900" OD to 28.000" OD		35 different sizes available from 1.315" OD to 28.000" OD	25 different sizes available from 1.900" OD to 20.000" OD
Gauge Availability	A variety of gauges are available. Some of the heavier sections are only available as a seamless product.		Standard gauges available are .125", .188", .250", .313", .375", .500", .625", .750", .875" and 1.000", as well as all the nominal pipe gauges.	Standard gauges available are .188", .250", .313", .375", .500", .625", .750", .875" and 1.000"; minimums apply to NPS gauges.
Straightness	Not specified		⅛" x length (in feet), divided by five	⅛" x length (in feet), divided by five

NOTE: Always refer to the current revision level of all standards.

To find a local HSS distributor, contact Atlas Tube.

atlastube.com | 800.733.5683

ATU-121923

1855 East 122nd Street
Chicago, IL 60633
P 800.733.5683
F 773.646.6128

200 Clark Street
Harrow, ON N0R 1G0
P 800.265.6912
F 519.738.3537

sales@atlastube.com
atlastube.com

Atlas Tube
A ZEKELMAN COMPANY