

STRUCTURAL TUBING — CARBON STEEL SELECTION GUIDE

Structural tubing is relatively low in cost, has a high strength-to-weight ratio and is easily welded, formed, punched and drilled. Its hollow shape protects and conceals wires, pipes, moving parts, etc.; and it can be left exposed.

HOLLOW STRUCTURALS are hot formed, conforming to ASTM A501 (Latest) — or cold formed, conforming to ASTM 500, Grade B (Latest). This tubing can be subjected to most of the unusual fabricating operations. Ductility is good. Bends well, flattens, cuts, punches, flares, flanges and welds easily.

TYPICAL MECHANICAL PROPERTIES

Condition	Tensile Strength in psi	Yield Strength in psi	% Elong. in 2"	Brinell Hardness (B scale)
Hot Formed (ASTM A501)	58,000	36,000	23	121
Cold Formed (ASTM A500) Grade B	58,000	46,000	23	121

LIGHT STRUCTURAL TUBING is electric resistance welded, and is made from low carbon 1020 strip. The homogeneous weld is as strong as the parent metal. Outside welding flash is removed on all sizes. Inside welding flash is controlled on all sizes under 2". This economical tubing is readily formed, bent or swaged. It is excellent for applications where outside finish is important — for example when surface suitable for high gloss painting is needed.

TYPICAL MECHANICAL PROPERTIES

Tensile Strength in psi	Yield Strength in psi	% Elong. in 2"	Brinell Hardness (B scale)
52,000	38,000	12	62

HOT ROLLED BUTT WELDED is made from low carbon, butt welded steel pipe, and has the outside welding flash removed. One of the lowest cost square or rectangular tubes, it is suitable for a wide variety of applications where surface finish is not of primary importance. For example, it is gaining increased acceptance as a light structural member in heavy equipment, farm machinery, etc.

TYPICAL MECHANICAL PROPERTIES

Condition	Tensile Strength in psi	Yield Strength in psi	% Elong. in 2"
HR (1/C 36)	58,000	36,000	20