How to calculate theoretic weight of a steel pipe and tube

The weight of a pipe depends on the weight density of the material that composes the pipe as well as the physical volume of the pipe. Weight density measures the amount of compactness of the pipe material expressed in pounds per cubic foot. The volume of a pipe equals its surface area times its thickness.

We have the professional engineers, measurement the size of steel pipes accurately.

Specifically, the surface area of a pipe is the same as a cylinder and equals the number of square inches that can cover the curved sides of the pipe.
T.W.=(D-S)*S*24.65/1000

T.W.=(A-S)*S*31.4/1000

T.W.=((B+A)/2-S)*S*31.4)/1000

T.W.=[(24.65*(B-S))+(15.7*(A-B))*S]/1000

T.W.=12.33*(B+A-2S)*S/1000

T.W.=[(A+(B/2*3.14))/2-S]*S*3.14

T.W.=24.65*(1.1*SW+1.2*S)*S/1000

T.W.=24.65*(1.06*SW+1.11*S)*S/1000

Where \( w \) = weight, \( d \) = outside diameter, and \( t \) = wall thickness. Multiplying this result by the length of the piece of steel pipe gives you the overall weight of the pipe in question.