

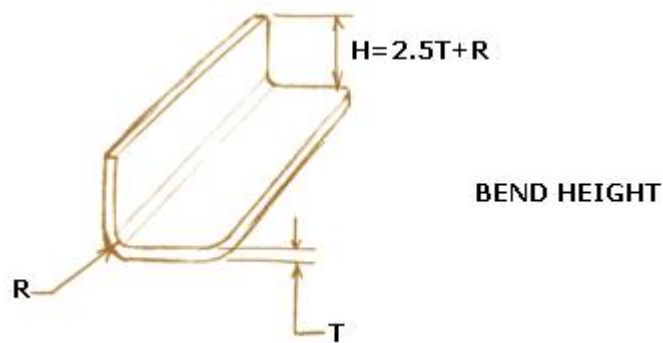
Forming Overview

Forming is similar to bending. Complex parts such as U-sections, channel sections of different profiles can be produced by doing multiple bends.

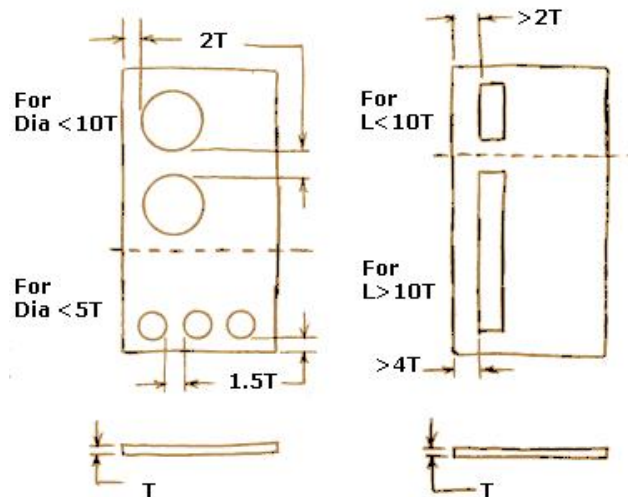
There is no change in thickness. Good dimensional repeatability as well as close tolerances is possible with this process.

Design Considerations

On bends, the short leg (inside length) should be a minimum of 2.5 X stock thickness + radius.

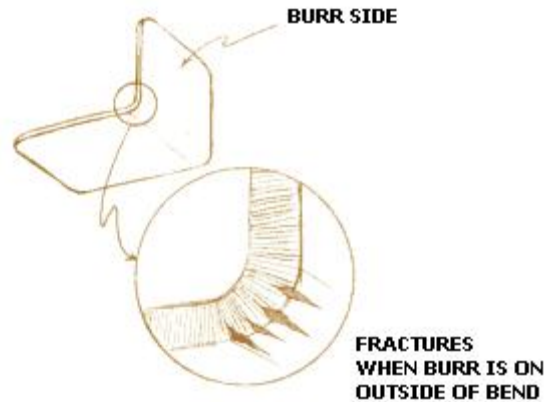


Minimum hole (and short slot) to bend distance should be 2.5 X the stock thickness + bend radius. For long slots, the distance should be 4 X the stock thickness + bend radius.



GUIDELINES FOR HOLE SPACINGS

Bending using tight radii or in hard materials often results in burrs and fractures on the outside of the bends. These can be eliminated by using larger bend radii and by providing relief notches at the edges on the bend line.



Bend relief notches should be provided = 2 X stock thicknesses in width (minimum 1.5mm / 0.060 in) and radius + stock thickness in length.



Generally, bending perpendicular to rolling direction is easier than rolling parallel to the rolling direction. Bending parallel to the rolling direction can often lead to fracture in hard materials.

Thus bending parallel to rolling direction is not recommended for cold rolled steel > Rb 70. And no bending is acceptable for cold rolled steel > Rb 85.

Hot rolled steel can be bent parallel to the rolling direction.