

# HOW TO JUDGE THE CUTTING EFFECT OF LASER CUTTING MACHINE?

*Posted on 2023-08-28 by redsail*



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In order to let everyone buy a [laser cutting machine](#) with better quality and effect, let me tell you how to judge the cutting effect of the laser cutting machine. Hope the following introduction is helpful to you.

## **Roughness**

The laser cutting section will form vertical lines. The depth of the lines determines the roughness of the cutting surface. The shallower the lines, the smoother the cutting section. Roughness affects not only the appearance of the edge, but also the friction characteristics. In most cases, it is desirable to keep the roughness as low as possible, so the lighter the grain, the better the cut.

## **Verticality**

If the thickness of the sheet metal exceeds 10mm, the perpendicularity of the cutting edge is very important. As you move away from the focal point, the laser beam becomes divergent and the cut widens towards the top or bottom depending on the position of the focal point. The cutting edge deviates from the vertical line by a few hundredths of a millimeter, the more vertical the edge, the higher the cutting quality.

## **Cutting width**

Generally speaking, the kerf width does not affect the cutting quality. Only when a special profile is formed inside the part, the kerf width has an important influence. This is because the kerf width determines the small inner diameter of the profile. When the thickness of the plate increases, the kerf width also increases. Increase. Therefore, in order to ensure the same high precision, no matter how large the incision width is, the workpiece should be constant in the processing area of the laser cutting machine.

## **Texture**

When cutting thick plates at high speed, the molten metal will not appear in the incision below the

vertical laser beam, but will be sprayed out at the rear of the laser beam. As a result, curved lines are formed on the cutting edge, and the lines closely follow the moving laser beam. To correct this problem, reducing the feed rate at the end of the cutting process can largely eliminate the line formation.

## **Glitch**

The formation of burrs is a very important factor in determining the quality of laser cutting, because the removal of burrs requires additional workload, so the severity and amount of burrs can intuitively judge the quality of cutting.

## **Deformation**

If the cut heats the part up sharply, it deforms. This is especially important in fine machining, where contours and webs are often only a few tenths of a millimeter wide. Controlling the laser power and using short laser pulses can reduce part heating and avoid deformation. (The content is for reference only)