# Tips to be Successful, Safe Punching Mild Steel

Punches must wear down and should not chip or crack. Punch chipping and cracking can be caused by a variety of factors. This is a quick checklist that will help you reduce the chances of this occurring.

**Loose Coupling Nuts**

This allows the punch to "move" during the process of punching. This could result in unbalanced pressures.

**Missalignment**

If the die is not aligned with the hole in the die, a non-uniform clearance will result. This can cause uneven pressure to the punch's surface.

Incorrect clearance of punch and die

The most commonly used clearance for tungsten carbide punche that is less than 1/2" thick is 1/32" total clearance. The material to be punched which is 1/4" or thicker will require a clearance of 1/16". Punching mild steel that is over 3/4" thick might require more die clearance.

**Uneven Stripping**

This happens when the machine's stripper fails to keep the plate in place during the "up stroke. This happens when the whole plate's weight as well as the strain of stripping is placed on one side or edge of the punch. In extreme situations the punch could break off completely. Up to half" of the punch may fall off. Once you intend to to find out additional information on punch tool, you must click over here at https://sunditools.com/punch-tooling/ site.

A few of these issues we have described can be managed on your shop floor. It is our responsibility to provide you with the finest punches. This is achieved with the most shock-resistant tool steels. Then, we machine to precisely controlled tolerances and to harden them and temper them using precise metalurgical processes.

Punches break and crack easily when punching plates with greater than 1/2". Our engineers have developed several super tough punches which perform in these tough conditions.

**Why it is Important to Have Longevity in Punching Tools and What It Means**

Controlling quality is crucial. No matter what industry, customers are less likely to trust a brand that is not trustworthy and consistent. Poor quality equipment can result in lost credibility, lower profits, reduced productivity, and decreased employee morale. The best equipment will give you

the highest return on investment whether your company is in its beginnings or is already a thriving one.

For shops that fabricate, punch tooling are critical for their operations. In fact, the FMA refers to them as "the Swiss army knife of the fab shop." There are many ways to enhance the quality of the products. But, it's important to invest in durable punching equipment to ensure an efficient and cost-effective workplace. These guidelines should be adhered to by every producer.

**As a Materials Consultant**

To ensure your punch tool lasts for a long period of duration, ensure the material you select matches the material being used. A good manufacturer of punches acts as a materials consultant to assist you in determining the right material for your tool. A2 steel, for example, is the material that punches were constructed from in the past. It's strong, versatile and holds its shape even after the heat treatment. But if you're stamping high-strength, low-alloy steel (HSLA) or a different advanced product, A2 is not up to the task. It is necessary to use a punch that has strong shock resistance and compressive strength such as CPM-M4 or M2. M2 steel is the better choice for heavy loads.

Improving the longevity of your punch tool life will require a change of mindset. It's true that using superior materials, coatings, or upgrading your finishes will increase the cost of your initial tool build. However, this must be compared to the costs of low-quality materials. In addition to the cost of replacement components, it is essential to weigh the cost of loss of productivity.