

Making High Quality Customized Screw Dies with Precision Engraving & Milling

Soon Bau Screw Mold Co., Ltd.

以精密雕工刻劃高質量的客製化螺絲模具
 順寶模具有限公司 by Dean Tseng, Fastener World

Located in Luzhu District of Kaohsiung City (southern Taiwan), Soon Bau was founded in 1987 starting off with manufacturing carriage screw die cores. Through the last 30 years, the company shifted from adopting traditional casting and EDM to CNC engraving and milling as a part of its technical upgrade. Today, the company provides many types of standard and customized screw punches and dies, punch bars and clamps for screws and nuts.

Developing CNC Engraving & Milling Technique

Targeting Customized High Quality Dies

After the successor took over the business from the founder, Soon Bau successfully shifted its manufacturing technique from traditional casting to high-level CNC engraving and milling. “With the increasing demand for customized screw dies, it became much clear that dies made from casting and EDM cannot form the curved surface and chamfer of special screws. In around the year 2000, we started to purchase CNC machines, and computerized, digitized and automated our whole manufacturing plant. Eventually we were able to produce dies with more precision, smaller tolerances, and better appearance.”

According to general manager Mr. Zhuang, the traditional EDM can only do 2 dimensional processing and requires manual polishing afterwards, so the quality is subject to human errors. The CNC engraving

and milling developed by Soon Bau can do 5 dimensional processing and cut out dies in various sorts of shape, thereby fully replacing casting and EDM and keeping the whole production line digitized, faster and consistent in quality.

Through precise engraving, Soon Bau has broken the bottleneck of processing complex curved surfaces. Its engraving technique is especially effective on making embossed words on curved surfaces. It focuses business on customized screw dies and punches available in various types of tool steel including SKH-9, SKD-11, SKH-55, ASP30, and ASP60. Mr. Zhuang said, “We can manufacture dies made of various types of steel that need to be heat treated! Such dies are more flexible and cheaper than highly rigid tungsten steel dies and therefore are suitable for forming special screws.” There is no limit to the available sizes of Soon Bau’s customized dies. The smallest ones that the company has manufactured so far are mini-turret screw dies, and the largest ones are construction screw dies in 1.5 inch diameter. If clients provide their drawings, the company can produce their ideal dies as per drawings.

Soon Bau Successfully Developed Difficult Tungsten Steel Punches

About a year ago, Soon Bau rolled out tungsten steel punches which are rare to the industry. It is highly difficult and time-consuming to polish this type of special rigid punch, but the company was able to create it through its precision engraving. Zhuang said the company’s special rigid punch can reduce die exchange, improve machine operability, increase capacity, and extend die life by more than 10 times.

Besides domestic sales, Soon Bau currently takes overseas orders through traders. Due to high precision and quality, its punches and dies are supplied to the automotive, shipbuilding, aviation and food industries. Zhuang added that the company recently developed T40 punches, and that it will continue to expand the product line to offer clients punches and dies in more available sizes.

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