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# 对海目星激光模切机的实际产能进行分析

## 摘 要

激光模切机是用于对极片上极耳成型的设备，采用激光切割技术对锂电池正负极的极片进行极耳成型，是一种连续性、高速性、高效率的机器。机器主要由放卷电机、放卷纠偏系统、放卷张力平衡装置、二级纠偏系统、激光切割装置、抚平极耳装置、收卷张力平衡装置、收卷纠偏系统、收卷电机组成。采用放卷电机与收卷电机同步运动连续性工作方式。机器通过放卷电机上料，经过放卷纠偏、放卷张力平衡装置和二级纠偏系统将料送到激光切割装置进行切割，然后通过抚平极耳装置、收卷张力平衡装置、收卷纠偏系统传送到收卷电机位置后制作完成。其中激光切割装置通过上位机 PLC 输出信号给到激光器进行切割，通过激光将极片打在切割口上进行余料切除，切割口的风速作为辅助来优化切割余料过程。

**关键词：**激光模切机；切割口；风速；极片

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## Abstract

Laser die cutting machine is a device for forming the ears on the pole piece, and negative poles, is a continuous, high-speed, high-efficiency machine. The machine is mainly composed of an unwinding motor, an unwinding correction system, an unwinding tension balancing device, a two-level correction system, a laser cutting device, a flattening pole device, a rewinding tension balancing device, a rewinding correction system. Using laser cutting technology to shape the pole pieces of lithium battery positive system, and a rewinding motor. Adopt unwinding motor and rewinding motor synchronous movement continuous working mode. The machine is fed by the unwinding motor, the material is sent to the laser cutting device for cutting through unwinding correction, unwinding tension balancing device and secondary correction system. Then it is transferred to the position of the winding motor through the flattening pole device, the winding tension balancing device, and the winding correction system. Among them, the laser cutting device outputs a signal to the laser through the upper computer PLC to cut, the pole piece is hit on the cutting opening by laser to remove the residual material. The wind speed at the cutting opening is used as an aid to optimize the cutting process.

**Keywords:** Laser die cutting machine; cutting mouth; wind speed; pole piece

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