WHAT IS A FIBER LASER?

In the fiber laser, the beam amplifying medium is an optical fiber doped with rare earths such as erbium, neodymium, ytterbium, dysprosium, holmium, praseodymium and thulium. For pumping, one or more laser diodes are used, so most fiber lasers are pumped diode lasers.

In addition, the fiber laser has a very small beam with a high power concentration, which makes it possible to achieve high precision in different thicknesses and materials.

What is fiber optics in physics?

Fiber optics is a cable-shaped waveguide of highly transparent material designed to transmit information over long distances by means of optical signals. The fiber is made of high-purity silica; with only 2 kg of this material, more than 40 km of optical fiber can be manufactured.

Benefits

Stability

Manufacturers currently promise up to 90,000 working hours, which is equivalent to approximately 10 years of continuous use.

Accuracy

The laser beam produced for cutting has a tiny diameter, which guarantees high cutting accuracy and the possibility of achieving very complicated shapes.

Power

The development of this technology has produced machines of more than 10,000 W (10KW), which can cut metals of very high caliber.

Lower maintenance costs

The fiber laser requires consumables such as lenses, nozzles, and gases mainly; which compared to other processes are more economical.

Environmentally friendly

his type of machines can use up to 80% of the energy they produce; thus being environmentally friendly and producing less thermal energy..

Ease of Use

The controls of these machines do not require a high degree of knowledge and a minimum need to intervene the machine when making a cut.

TEC LASER