JACKSONVILLE, Fla. – It’s not quite a lightsaber, but the sheet metal mechanics who operate Fleet Readiness Center Southeast’s new fiber laser cutting machine are well on their way to becoming the Jedi of their trade.

The laser cutter gives the Navy aviation maintenance, repair and overhaul facility an efficient additional way to cut thin metals, like aluminum, that make up such a large part of its workload.

“Ninety-percent of what we cut is aluminum,” said sheet metal mechanic John Montgomery. “But it can also cut cold-rolled steel, stainless steel and titanium.”

Though the machine is capable of cutting quickly – up to 1,000 parts per hour – it’s also accurate.

“The cut quality is really good,” sheet metal mechanic Andrew Green said. “The fiber laser cut quality is better than our old laser cutter.”

The usual margin of error on a part is 0.030 inches. The fiber laser cutter can cut down to
0.001 inches.

In addition, the machine also works well with some of FRCSE’s other milling processes. Chemical milling was introduced by the facility’s materials lab in 2015. The process uses a chemical bath to eat away a desired portion of metal. However, any scratches already in the metal can be exacerbated by the chemicals.

“On our old machine, the material moved and the cutting head was fixed,” said sheet metal mechanic Josh Brown. “That would sometimes cause scratches as the material was moved.

“On this machine, the material stays stationary and the cutting head moves.”

The Amada Fiber Laser is also capable of varying its cutting depth.

“Now we can include the etching in with the program for the part and do the cutting and etching without ever taking it off the machine,” Brown said.

Though there’s always a learning curve with new technology, the laser cutter is already proving its worth to the men who operate it.

“I know this can handle anything we throw at it,” Montgomery said.

JACKSONVILLE, Fla. (March 1, 2018) Fleet Readiness Center Southeast sheet metal worker Josh Brown shows the etchings performed on the facility’s new fiber laser cutter on a part template. What used to require two machines can now be done on the laser cutter. (U.S. Navy photo by Clifford Davis/Released)
New machine at Fleet Readiness Center Southeast cuts metal with laser focus

JACKSONVILLE, Fla. (March 1, 2018) John Montgomery, an FRCSE sheet metal mechanic, removes excess metal from the facility's new fiber laser cutter after it machined the desired pieces. (U.S. Navy photo by Clifford Davis/Released)