



A Clean Steel That Lasers Faster, Holds Shape, Cuts Downtime

SCS stands for *Smooth-Clean-Surface*, an amazing flat-rolled steel offering valuable competitive advantages for laser, plasma and torch cutting. It's a replacement for pickled and oiled and hot-rolled black, and it's so smooth and so clean you'll be convinced it was invented just for laser cutting.

The patented SCS process feeds ordinary coils or sheets of hot-rolled black through an abrasive brushing, rinsing and drying system where all dirt, heavy scale and rust is removed. What remains is a microns-thin layer of oxide that's mechanically bonded to the base steel and polished to a smooth, cold-rolled matte finish.

The SCS surface is more than just smooth and 'ultra-clean'. *It actually inhibits rusting.* No coating or oil is used and no special packaging is required. SCS resists rusting with normal handling and protected storage, giving it a 'shelf-life' that extends for many months and even years. And when material with existing rust is run through the SCS process, the rust is removed and does not return.

LASER CUTTING IN OVERDRIVE

If you laser P&O, you've seen how splash and smoke can fog the laser lens and quickly foul exhaust filters. If you laser hot-rolled black, the dirt and scale can cause beam diffraction that hampers smooth cutting. Very heavy scale or surface rust may even shut off the laser.

SCS removes such obstacles, providing a very consistent distance between lens and sheet surface, plus a finish so clean and smooth the beam encounters virtually no

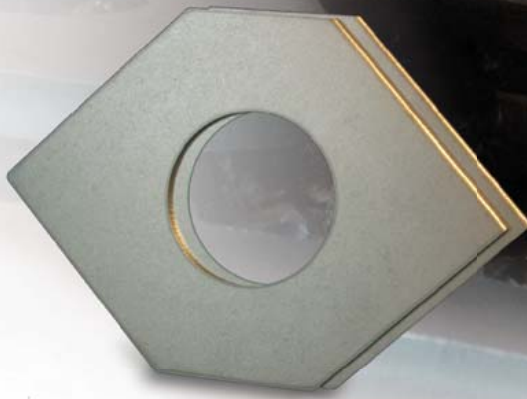
'debris' along its cutting path. This lets you choose a nozzle size and power level combination that leads to an increase in cutting speed. How much? Following the recommendations in our *SCS Laser Guidelines*, users routinely see 15% to 20% increases over their highest speed for cutting P&O. Some have increased speed as much as 50% - laser and plasma cutting!

THE SHAPE OF QUALITY

Laser operators want steel that's as flat as possible and SCS offer the flatness they're looking for. As part of the SCS process, coils undergo a combined roller and tension-leveling to remove edge wave, bow and many coil breaks. When material is SCS processed in sheet form, it is first either temper passed, cold-rolled, or aggressively roller-leveled to remove most shape defects.

And in many cases, laser-ready SCS sheets first have virtually *all* shape defects removed through stretcher-leveling - a method of putting the material into plastic deformation that stress-relieves the entire sheet. *SCS sheets that are stretcher-leveled do not spring back after lasering!*





'Twin' parts lasered from stretcher-leveled SCS are dead-flat with no springback.



0.375" parts suffered chronic flatness problems until the switch to SCS.

"New laser units like ours are fast to start with, but SCS gives us another 15 to 25% speed improvement over HRPO."

Bryan Hawkins, Owner
Hawkeye Industries

PERVASIVE PRODUCTIVITY GAINS

Faster cutting . . . reduced springback. These are big, bold productivity gains you can capture by switching your laser/plasma cutting to SCS. But there are more subtle efficiencies that result from the switch to SCS - advantages that are rooted in the remarkable SCS cleanliness.

When your steel is 'SCS-clean' everything it touches stays cleaner. Like equipment, tooling, work clothes. You spend less time cleaning your shop. You also spend less time cleaning lasered parts for painting or finishing.

And when it comes to painting those SCS parts, the paint pre-treatment can be considerably leaner than that needed for P&O or hot-rolled parts, yet the paint finish and corrosion protection of the SCS parts will outperform P&O or hot-rolled in nearly every case.

Other valuable SCS productivity advantages:

- **Reduced maintenance due to cleaner lenses, filters and no head damage from springback.**
- **No material handling shutdowns from oily blanks sticking together when destacking.**
- **Recover the value of material that's rusted or has shape problems. SCS removes rust and resuscitates the surface.**

Laser job shops and multi-laser/plasma operations can even leverage SCS productivity gains to avoid capital outlays. One such job shop owner shelved his plans to add a sixth laser, acknowledging that SCS, "Will let us grow our business with the five lasers we already have!"

GETTING STARTED WITH SCS

Conducting an SCS laser trial is easy. Whether you need three sheets or thirty bundles, we'll SCS process your material and support you in maximizing laser or plasma cutting performance. We'll also provide you with the **SCS Laser Optimization Guides**, developed with laser equipment OEMs to get the most from laser cutting SCS. Contact us to discuss your SCS trial today.