

Welding Fumes - Nuisance or More Serious Health Hazard?

Editor's Note: "Welding Fumes Health Hazards" by Vicki Bell was published March 11, 2004 by thefabricator.com and served as the source of much of this article. It is an excellent reference for more information on the subject.

Recent reports by the National Institute for Occupational Safety and Health (NIOSH) are raising concerns about the risks faced by welders from exposure to fumes. The sources of welding fumes are numerous and include the base material and filler material, coatings and oil on the material, the electrode, shielding gases, vapors from cleaners and degreasers applied to the material, and chemical reactions from the ultraviolet light of the arc and the heat generated.



What sorts of contaminants are produced by welding that pose a health risk? The list can be daunting: chromium, nickel, asbestos, manganese cadmium, nitrogen oxides, lead, arsenic, selenium and other toxins. The adverse health effects linked to welding smoke include 'metal fume fever'; irritation of the eyes, nose, chest and respiratory tract; bronchitis and fluid in the lungs - all from high, short-term exposures. Effects of long term, chronic exposure may include asthma, lung cancer, cancer of the larynx and even nervous system disorders such as a Parkinson's-like disease.

Researchers point out that it is difficult to draw hard conclusions about the hazards of welding fumes due to the wide variety of materials and processes involved in welding and the lack of laboratory-controlled toxicology studies that examine biochemical reactions to welding fumes at the molecular level. Still, welders need to take all reasonable measures to safeguard their health and safety when it comes to fumes. One good source for ideas is American Federation of State, County and Municipal Employees (AFSCME) welding hazards fact sheet, which can be viewed at the AFSCME web site through www.afscme.org/health/faq-weld.htm

Of course, minimizing welding smoke at the source is one area where SCS can really make a difference. Replacing P&O material with SCS eliminates the oil that can be dangerous in two ways. First, burning the oil itself generates toxins. Second, the excess smoke generated from burning oil creates a more effective medium for transporting extremely fine particles of metals, electrodes, insulators and other materials that represent the most dangerous suspected toxins from welding.

So while one of the reasons many fabricators have switched from P&O to SCS was to reduce the 'nuisance' of P&O's excess welding smoke, those same fabricators are now learning that, in fact, they may have also taken an important step toward safeguarding the health of their employees.

If you're concerned about possible adverse health effects of fumes from welding P&O material, contact The Material Works to obtain SCS samples. Perform your welding trials on SCS to see the reduction in fumes compared to P&O.

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TMW and Heidtman Steel Join Forces on SCS Coil Line

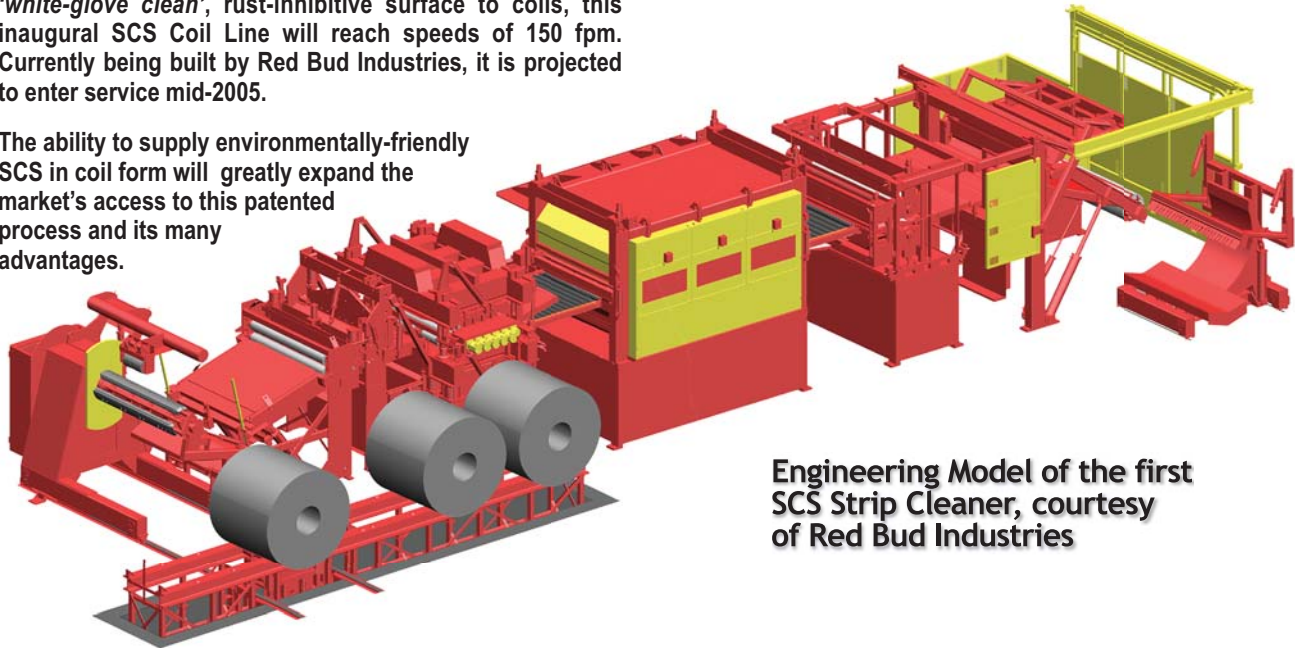
Upcoming Industry & SCS Events

New SCS Web Site Launched

TMW and Heidtman Steel Join Forces on SCS Coil Line

The Material Works has entered into a joint venture with Heidtman Steel Products, the country's largest privately-held flat-rolled service center network, to build the first coil-to-coil SCS production line. Bringing the SCS oil-free, 'white-glove clean', rust-inhibitive surface to coils, this inaugural SCS Coil Line will reach speeds of 150 fpm. Currently being built by Red Bud Industries, it is projected to enter service mid-2005.

The ability to supply environmentally-friendly SCS in coil form will greatly expand the market's access to this patented process and its many advantages.



Engineering Model of the first SCS Strip Cleaner, courtesy of Red Bud Industries

Heidtman Steel is uniquely qualified to help bring those advantages to the flat-rolled market. Now in its 50th year of operation, Heidtman serves the automotive, truck and bus, construction, appliance, furniture and pipe and tube industries. Noted for its expertise in high-strength steel, Heidtman processes nearly five million tons of steel each year through its wholly-owned facilities and joint ventures. To learn more, visit www.heidtman.com

Upcoming Industry and SCS Events

Coil Slitting and Cut-to-Length Workshop
October 5 - Toronto
November 9 - Cincinnati, OH

A unique "Best Practices" seminar featuring industry experts and a tour of a state-of-the-art slitting line. A comprehensive overview of SCS technology is included. For more info visit www.redbudindustries.com

Galvanizers Associations
October 4 - Charleston, SC

USA's largest galvanizing conference, hosted by Nucor Steel. For details visit: www.galvanizersassociation.com

New SCS Web Site Launched

TMW recently launched a revised version of the SCS web site with the new URL www.scsprocess.com.

The site is organized to address the information needs of three different audiences:

- **USERS** who wish to purchase SCS for their products;
- **SERVICE CENTERS** wishing to use the SCS process;
- **INTERMEDIARY PROCESSORS** who see SCS as an alternative to P&O, temper pass and other materials.

The new web site educates visitors as to exactly what SCS is, how it is being used, what benefits it delivers, plus ongoing developments. Whether you're new to the process or have been investigating it for some time, www.scsprocess.com should prove to be a valuable resource.

