National Coil Coating Association

Four Reasons Why Coil Lines Are Not Just for Painting

Manufacturers have long benefitted from the speed, precision and non-polluting aspects of using coil lines to make prepainted metal panels. However, some manufacturers are unaware that many companies are using coil lines for a variety of different functions on metal coils, from reclamation, to pretreatment, to simply giving it a better-looking finish. Here are four ways manufacturers benefit from using coil lines as an effective first-step operation beyond prepainting.

#1 - Coil coating offers easier and effective stamping

When it comes to stamping metal parts, there are a lot of issues with the use of lubes and oil. Perhaps the biggest issue is safety. During this process, oil often drips onto the floor which can be dangerous for employees walking or operating a forklift. In some cases, using oil can affect the productivity of the manufacturer. For example, companies fabricating parts in the past have applied so much oil that they had to cease use of millions of dollars-worth of robotic equipment because the steel had become too slick to grasp. By switching to a coil-line-applied dry film lubricant, or DFL, the companies can increase productivity and keep plants clean.

#2 - Benefits of Preprimed Metals

Coil coaters offer a variety of options for manufacturers that post-paint products don't. By purchasing a preprimed material that has been cleaned, pretreated and primed at a coil line, even parts that require post painting can use the coil coating process to eliminate the first step of the painting process. Outsourcing the cleaning, pretreating and corresponding waste treatment that occurs with those operations makes for sound financial and environmental decisions. Using a coil coating primer from a coil line can also provide protection from corrosion and debris when steel products are stored in warehouses before they are ready for post painting.

In addition, coil lines can also apply primers suitable for welding. These primers are conductive and can be used whenever resistance welding is used to join metals. Weldable primers also protect products from rust. Trying to weld mill finished products with their corresponding mill oil can cause a smoke hazard. Therefore, using a coil line to eliminate oil and apply a weldable primer not only delivers a better quality product, it also leads to a much safer work environment.

#3 - Environmental and Regulatory Benefits

While using metal pretreated from a coil line helps keep a shop floor clean and safe, coil lines also help customers keep up with the growing number of environmental regulations. The coil coating process itself is considered the most environmentally responsible way to apply a pretreatment to steel and aluminum substrate. Outsourcing pretreatment also eliminates the need for workers to be exposed to chemicals or solvents and allows for any environmental issues to be concentrated, controlled and even eliminated.

Coil lines use a highly efficient closed-loop process, which means the coating line includes a thermal oxidizer that burns the harmful volatile organic compounds, or VOCs, and returns the heat energy created during the thermal oxidation process back into the manufacturing facility. This saves energy and eliminates pollutants. Coil coating achieves at least a 98 percent rate for capture and destruction efficiency, which eliminates toxic air pollutants that would otherwise be released in the air. Coil lines also minimize flue gas emissions by maximizing thermal efficiencies and minimizing the volume of air sent to the control device. Coil lines also reduce energy consumption by having a workable system in place to minimize the quantity of fresh air being used in the curing ovens and thermal oxidizer.

Coil line companies are subject to the highest EPA standards and meet or exceed these standards as they become more stringent year after year.

#4 - Coil coating provides precision and efficiency

The best electrostatic paint spraying system fails to deliver a coating as consistent and efficient as a coil line. Coil lines are designed for speed and efficiency, with a transfer efficiency of nearly 100 percent. There is no overspray, waste or release of chemicals into the atmosphere. Coil lines run metal coils in a continuous process which provide consistency from head to tail and edge to edge.

Whether a manufacturer is looking for a cleaner and safer plant floor, a more precise pretreatment or an easier way to abide by the latest environmental regulations, using a coil line can greatly improve a company's productivity, lower costs in the long run and reduce the amount of inventory in warehouses.