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# How to Save with Prepainted Coil

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# Coil Coating Technology: Almost Unlimited Benefits

If you are a manufacturer using painted steel, aluminum or other metals in your manufacturing process, there is a process you should consider that can improve productivity, reduce processing costs, improve quality, reduce inventory, and reduce environmental emission concerns—all at the same time.

The technology is coil coating, or prepaint. With this technology, large coils of metal sheet stock (including cold-rolled steel, hot dip galvanized, electro galvanized, zinc-steel, aluminum, stainless steel, copper, and brass) can be coated in a continuous, highly automated process prior to fabrication.

During this continuous process, the metal coil is unwound, the top and bottom sides are cleaned, chemically treated, primed, oven-cured, topcoated, oven-cured again, and then rewound for shipment.

The variety of coatings available is almost unlimited and includes: polyesters, polyurethanes, epoxies, vinyls, plastisols, acrylics, water-borne emulsions, zinc-rich coatings, fluorocarbons, dry lubricants, and treatment and primer combinations.

In addition, preprinted coils can also be printed, striped, or embossed to create special visual effects.

What about flexibility? Preprinted coils can be rewound, drawn, formed, bent and blanked.

In addition, the preprinted metals can be fastened with bolts, screws, rivets, Tog-L Locks, etc. They can also be lockseamed, adhesive bonded, and, in some cases, welded.

## History of Coil Coating

The old saying that, "Necessity is the mother of invention" holds true for coil coating. Through the 1930s, the venetian blind industry cut slats of metal to length from coils, hung the slats on racks, and passed the racks in front of spray paint guns.

The process caused problems. The first was productivity, caused by bottlenecks, due to the fact that the paint lines were only able to run 15-20 feet per minute. Quality also suffered, due to lack of uniformity of the finish on each slat, as well as inconsistency of the coating on the painted surfaces (paint drips and runs).

Coil coating technology solved these problems. Professional coil coaters were able to coat metal coils at a rate of 200-400+ feet per minute "in the flat" with consistent uniformity. The preprinted coils arrived at the fabrication state ready to be cut.

Since that time, usage has exploded in many different industries. Between 1990 and 1999, for example, coated steel coil shipments more than doubled, from 2.1 million tons to 5.1 million tons.

## The Benefits of Coil Coating

The benefits of coil coating can be defined in seven different categories: productivity gains, process cost savings, quality improvements, inventory reductions, space savings, environmental compliance, and capital equipment cost savings.

**1 - Productivity Gains.** Conversion to preprinted substrate technology allows manufacturers to eliminate their internal painting operations, whether they are currently spray paint or flow coat. Since these finishing operations tend to be the biggest bottlenecks in production, third-party coil coating improves productivity.

**2 - Process Cost Savings.** Customers reap process cost savings in three areas.

The first is material economy. The laydown of the paint is precise, allowing much better control of film thickness than powder or spray applications. Since a minimum of paint is used, with no waste, this keeps paint costs low.

The second is energy economy. Coil coaters utilize the most energy-efficient curing processes available.

The third is manpower economy. Today's coil coating lines run at very high speeds, with some operating at 600-800 linear feet per minute.

**3 - Quality Improvements.** While internal finishing operations tend to be the source of most bottlenecks in production, they are also usually the source of the most quality problems. Coil coating eliminates quality problems because of the process it uses. Since the

metal is painted "in the flat" (before fabrication), the process allows for uniform cleaning, pre-treatment, priming, and topcoating.

In addition, because both sides are prepared, coil coating prevents problems that might occur in the future related to product rusting from the inside out. In sum, besides an enhanced appearance, coil coating provides product durability and extended service life.

**4 - Inventory Reductions.** Because of the elimination of bottlenecks in the finishing process, work-in-process inventory can be reduced or even eliminated.

**5 - Space Savings.** Being able to eliminate or dismantle an internal paint line frees up valuable plant floor "real estate" that can be used for other more profitable activities. In some cases, the extra space can eliminate the need to expand to larger facilities as growth takes place in the organization.

**6 - Environmental Compliance.** Beginning in the 1970s, the Environmental Protection Agency (EPA) began regulating manufacturers in terms of their waste discharges into the air and water. Over the last twenty-five years, EPA requirements have become more and more restrictive, requiring the capital burden of having the technology and manpower to manage volatile organic compounds (VOCs), paint storage, fumes, waste, etc. and making compliance more and more difficult.

In addition, OSHA introduced regulations regarding employee exposure to hazardous materials. As a result, many manufacturers faced the choice of either shutting down their lines or spending large sums of money to become and remain environmentally compliant.

Professional coil coaters eliminate this problem. They have properly approved water and air pollution equipment in place, which meet EPA and other state/local environmental requirements. Since coil coating is a closed-loop process, coil coaters are able to capture volatile organic compounds, control fugitive emissions, and capture and regenerate solvents. These processes eliminate air and water discharges, making coil coating the most environmentally friendly process known for applying finishes to metals.

**7 - Capital Equipment Cost Savings.** Internal paint lines tend to be very capital intensive, and therefore very expensive, requiring significant investments in equipment. In addition, manufacturers who do their own painting generally find that they are required to stay abreast of the latest coating technologies—equipment, processes, and coatings. Professional coil coaters eliminate this need by staying up on the latest technologies themselves.

Recent technological advancements, for example, include friction-free movement of rolls, automatic control of coating (allowing operators to input the pressures, speeds, and directions for the rolls, then having the rolls automatically move into those positions and maintain those positions).

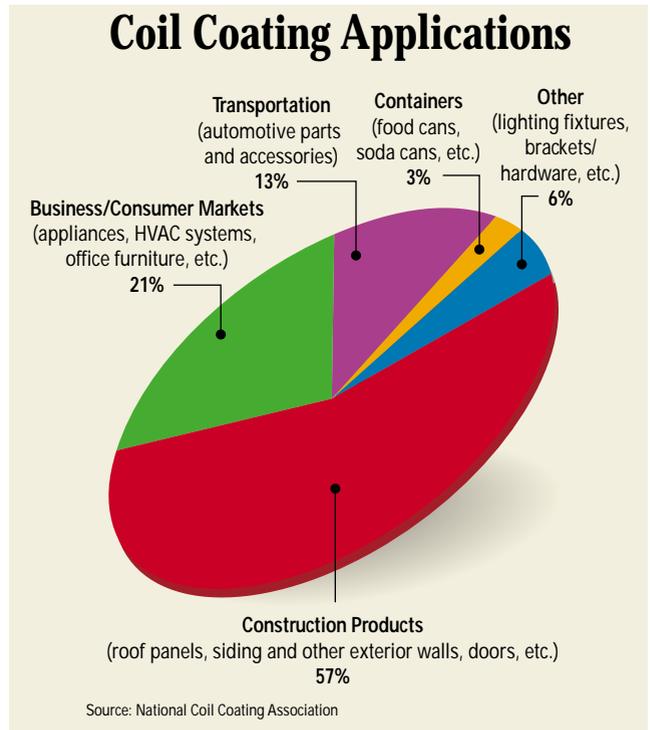
Upcoming technology looks at new ways to apply liquid coatings as well as coating via powder and electron beam.

In sum, you can now get out of the "painting business" and focus instead on your core competencies—the design, manufacture and assembly of your products.

## Coil Coating Considerations

There are three general issues customers need to address before they can determine if coil coating is right for them: applications, volume, and operations.

Applications. How and where can coil coating be utilized? It is currently being used successfully in a number of industries. See chart below.



**Volume.** The second issue is whether the amount of coating work the customer needs done will be economically feasible to consider professional coil coating. Many customers who would have small quantities due to a number of different colors arrange for coil coaters to perform all of the work up through the priming process. That is, the coil coaters clean, treat, and apply the primer. The customers then apply their own topcoats in their colors of choice. This also allows inventory flexibility for the end customer.

**Operations.** There are three issues to address here: design, handling, and fastening.

One concern some customers have about prepaint technology is whether they can get a finished paint coating over the complete exterior surface of their products, as they can when they fabricate their products and then postpaint the products themselves.

One way to overcome this challenge is to design products in such a way that cut edges are hidden. Strategies here can include well-placed bends, the use of trim pieces, and placing cut edges where they will not be seen.

In terms of handling, it is important that the handling processes for incoming prepainted rolls are such that the processes will not mar or scratch the finished coatings. Most

customers find that this challenge is easily solved.

In terms of fastening, coil coated metals can be fastened a number of ways, including bolts, screws, rivets, and Tog-L Locks. They can also be fastened via lockseam, adhesive bonding, and, in some cases, welding. Welding can be used if customers purchase pre-primed coils and then apply their own final finishes (as discussed above in the segment on "Volume").

Adhesives especially offer a lot of opportunities. New capabilities related to adhesive bonding continue to become available on a regular basis. Anyone in the design phase of a product that will be utilizing coil coating technology would be remiss if they did not take a hard look at the possibilities offered by adhesives.

## Satisfied Customers

**Addison Products Co.** One company that has reaped numerous benefits by switching to pre-paint technology is Addison Products Co., Orlando, FL, which manufactures HVAC units. Until recently, Addison was using an in-house electro-deposition coating system. "The formed material was cleaned by putting it through a process of chemicals to remove grime," explains Ronn A. Croston, C.P.M., purchasing manager. "It was then dipped into a tank, sent through a wash, pre-treat, dry, primer, paint, and then finally baked."

In 1999, the company became more interested in cost reductions and cost containment of the painting process. "We wanted to see if there were any benefits to utilizing pre-painted sheets over our already established postpaint process," states Croston. "With the high rise in energy costs and stiffer EPA regulations, we thought it was necessary to explore coil coating."

The company was already familiar with coil coating technology and its use in other industries. However, its initial concern was durability. "We weren't sure how well prepaint would hold up to the elements and the environment," he explains. Once the company explored the situation further and realized that the technology did indeed provide excellent durability, it decided to make the transition.

Addison Products created a Design Control Project Team to facilitate the conversion. The team consisted of representatives from purchasing, engineering, marketing, technical services, manufacturing and quality control. "Utilizing a time chart, we addressed paint specifications, vendor selection, material availability, fastening, product design and redesign, tooling, fabrication, and material handling," states Croston.

One decision the team had to make was to switch metal service centers. "We are now utilizing a metal service center

## Use of Prepaint Doubled in the 1990s

(annual, supply, million tons)



Source: National Coil Coating Association  
 Estimate: Purchasing Magazine

that is able to assist in pre-paint conversion," he notes. "They process our metal requirements for pre-paint."

By working with the coil coater, paint supplier, and service center, Addison Products has been able to develop specifications that meet its industry requirements, such as mil thickness of the primer and paint.

The company closed down its internal electro-deposition coating system on December 17, 2001, and made the conversion to 100% pre-paint technology when it reopened after the holidays in January 2002.

"We will see an immediate cost savings for 2002," emphasizes Cro-

ston. Estimated annual savings break down this way:

- \$52,000 - electric usage
- \$40,000 - cost of paint (and inventory space savings)
- \$38,000 - weekly maintenance of the electro-deposition coating system
- \$35,000 - gas and water usage
- \$32,000 - chemicals usage (and inventory space savings)
- \$ 7,500 - equipment upgrades
- \$ 7,000 - EPA regulation costs

This represents \$211,500 savings for the first year.

What about labor cost savings? This will also be significant.

Addison offers its customers an Addiguard Protective coating, which was applied to the finished product over the electro-deposition coating, and will now continue to be applied over the pre-paint coating. "When we were using the electro-deposition coating process, employees had to spend hours sanding the acrylic paint to make it porous enough for the coating to adhere," states Croston. "With the pre-paint, all we have to do is wipe the surface down and over-spray it with the Addiguard coating." Croston estimates that the direct labor savings in eliminating the electro-deposition coating line, including the time required to prepare the products for Addiguard coating, will be approximately \$50,000 a year.

**Grand total savings in 2002: \$261,500.**

"We plan to continue making improvements in material handling, fastening, and quality control that will improve our product even more," states Croston. "As such, the product we offer to our customers will be one of the finest on the market, with the entire backing and technology of the coil coating industry."

**Nordyne Inc.** For Nordyne Inc., Boonville, MO, a manufacturer of HVAC equipment, quality has always been a top priority. This, in fact, is the reason the company began switching from its internal electrostatic pre-painting process to coil coating technology about four years ago.

"Coil coating has been of interest to the HVAC industry in general for the last fifteen or twenty years, because we have seen the benefits it has provided to manufacturers in the

appliance industry," reports Dodd Schimpf, plant manager. "In fact, coil coating has been used in the HVAC industry for indoor applications such as furnaces for a number of years."

The concern Nordyne had, though, was with coil coating technology as it related to products used outside, such as air conditioners. "We were unable to find a coated material that we felt could stand up to the outside elements, especially the salty air on the East and West Coasts," he continues.

Approximately five years ago, as Nordyne kept an eye on the ever-improving technology of coil coating, it began to feel comfortable that the technology had evolved to the point where it was equal to or exceeded the durability of Nordyne's internal electrostatic postpaint system.

As of 1998, Nordyne had switched to coil coating 100% throughout the company. "We do no more postpainting," Schimpf states. Coil coating is used in the company's twelve major production lines and twelve additional subassembly parts areas. "We do use some uncoated galvanized material for internal parts, but all external parts are coil coated," he adds.

In making the transition, Schimpf recalls two challenges, both of which were resolved via teamwork with all of the parties involved. One related to the possibility of scratching parts during material handling and processing. "We solved the material handling issue by utilizing dedicated storage containers or using foam or other material to separate the parts," he reports. In the production area, dies were upgraded and polished so as not to scratch, scar or mar the parts being made.

The second challenge related to the need to create some deep-draw parts. "We have some five- and six-inch draws, and we needed to do these without having the coated surfaces peel, crack, or chip," he continues. The solution here was teamwork with the processors, the coaters, and the paint people, who helped create the ideal formulation. "We also reworked the dies," he adds. Now, Nordyne is able to produce these deep-draw parts successfully 100% of time as long as the proper parameters are maintained.

Results and benefits? They are impressive.

\* Inventory: Nordyne has seen a 200% increase in raw material turns and reaped \$1 million a year in inventory savings.

\* Space: The company sold its electrostatic system, got it



Many companies report increased productivity after moving to pre-painted coil. Paint lines are often major bottlenecks.

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out of the building, and freed up the space for more manufacturing. The reduction of inventory also freed up additional space. The result: "We have grown consistently each year, and the extra space has allowed us to increase our capacity without having to add more floor space," Schimpf reports.

\* Quality: Nordyne has conducted salt-spray tests on coil coated parts over a number of hours to measure adhesion. "The process has proven to have increased quality and reliability over our old electrostatic postpaint system," he states. "In fact, we now publicize this improved quality and reliability as a competitive advantage for our products, especially on the East and West coasts."

\* Environment: Even though Nordyne has always been relatively "clean" from an emissions standpoint, the company was still required by law to do a lot of environmental reporting as a result of its postpaint system. "Now, the only thing we report are emissions from the aerosol spray cans that we use for touch-up," he notes.

\* Customer responsiveness: This has been particularly far-reaching and impressive. "Coil coating has allowed us to improve our customer responsiveness by increasing the speed and flexibility with which we can respond to customer demand," explains Schimpf. It has done this by allowing the company to successfully implement Demand Flow Technology (DFT). DFT increases the velocity of production through the plant, getting rid of the fabrication departments by integrating the work into the production lines.

Here's how this evolved. "The paint line eliminated one of our major bottlenecks in plant," he explains. "This allowed us to do more point-of-use processing." Before, parts had to go through a certain number of operations. No matter how many parts were fabricated or how quickly the work could be done, the parts still had to go through the electrostatic postpaint line, which would usually take two hours or more, before they would be available for use in production.

Now, as a result of shifting to coil coating technology and being able to implement DFT, Nordyne has, in many cases, moved the parts fabrication machines up to the assembly lines, where operators can now literally produce one for one. In other words, instead of being part of the fabrication department, the operators are now part of the assembly line. "If the assembly line needs Part A, the operator can make Part A," he explains. "If they need Part B, the operator can perform a quick change and make Part B." This has almost completely eliminated work-in-process inventory.

\* Productivity: As a result of pre-coating and DFT combined, Nordyne has seen a 400% improvement in work-in-process.

Schimpf summarizes: "For us, this has been a very good transition. It is a tremendous improvement over what we had before, and we have no visions of ever going back."

**Maytag Corp.** Maytag began using prepaint technology in 1991 when it opened a new dishwasher manufacturing facility in Jackson, TN. "We made the decision not to put a finishing operations into the facility when we opened it, deciding to use prepaint instead," states Mike Hamand, manager of materials development. "The major reason was to prevent the environmental emission problems we would have had with a finishing operation." Another reason was the obvious reduction in capital expenses coupled with an increase in capacity.

In 1999, due to the overwhelming success of prepaint, Maytag elected to expand its use from pre-painted aluminum inserts on its dishwashers to form-sheet steel components for dishwashers, washers and dryers. "At first, marketing and sales

had a lot of concern about possible corrosion at the cut edge," reports Hamand. "However, we did a lot of testing with our paint suppliers and steel vendors and found that this would not be a problem." Additional testing uncovered another benefit: "Prepaint provides a far superior product compared to postpaint in terms of long-term durability," he adds.

The decision to shift to prepaint has recently begun to offer another benefit. This occurred when Maytag made the decision to move to a lean manufacturing system. "With lean manufacturing, the idea is to be able to use a part when we produce a part," he explains. "For example, when assembly needs a cabinet, we make a cabinet." With prepaint technology, the facility can easily accommodate the requirements of lean manufacturing. "In a postpaint system, it would have taken eight hours of leadtime to get a flat piece of steel to a formed, painted cabinet." In addition, with prepaint, only two people need to handle the cabinet. With postpaint, it would have required 14 people.

## Frequently Asked Questions

Here are a number of questions customers often ask about coil coating technology:

**Q:** Why should I consider prepaint rather than convert to a powder system?

**A:** To fully answer this question, you must look at powder coating in three ways: 1) as an alternative to prepaint, 2) using powder in conjunction with prepaint, and 3) powder as a prepaint coating method.

As an alternative, powder looks like the most logical step from wet paint to solve environmental problems, but it is limited in its environmental friendliness. Powder solves one environmental problem—the elimination of VOCs. However, powder leaves open the issue of cleaning, pretreatment and the disposal of sludge. Prepaint solves all environmental problems, including air, water solvents, and waste disposal. Prepainted metal is cleaned and treated in the flat, affecting better cleaning and pretreatment, and correspondingly, a higher quality product.

Certain applications can benefit from the unique advantages of both prepaint and powder technologies. The coil coating process can be utilized to clean/pretreat and prime, providing a superior surface for subsequent powder coating. This combination meets both air and water compliance issues and provides a superior product for corrosion resistance and adhesion. This utilizes the technological advantages of both prepaint and powder.

The third part of the powder question is its use in the coil coating industry. Recently developed application methods can be used to coat a variety of substrates heretofore unavailable via the prepaint method, such as uneven surfaces, or perforated or expanded metal. As a coating method, powder is a new technology in the coil coating industry. Powder coating is effective on a variety of surfaces, including perforated, expanded and embossed metal.

rated, expanded and embossed metal.

**Q:** What are the costs of an in-house spray operation?

**A:** There are numerous primary, secondary, and hidden costs.

Primary costs are materials, people, energy, water, and the cost of compliance.

Secondary costs are the cost of rework, the time involved in manufacturing the product, the number of manufacturing steps appropriate to produce a product in a spray operation, and, of course, touch ups.

Hidden costs include lack of flexibility, since you can only apply one coat at a time, growth limitations, and slower manufacturing cycle time due to a paint line bottleneck.

**Q:** How does the overall corrosion resistance of coil coating compare to my current method?

**A:** Unquestionably, the corrosion resistance is better using prepainted metal than metal from a typical postpainted product. Due to the superior cleaning and treating of the strip during the coil coating process, the priming of both sides, and the painting of both sides, prepainted metal has better cut edge corrosion resistance than postpainted metal. A fine line of corrosion may develop on the cut edge of prepainted metal, but the resistance to underfilm corrosion creepage will be much better than with postpainted metal. The corrosion resistance is also better where nicks and scratches occur.

**Q:** How does the process affect floor space and throughput?

**A:** When you eliminate a postfinishing operation, you free up floor space. Additionally, since work-in-process inventory is reduced, the demands for additional floor space are correspondingly reduced. Production capabilities can grow

without adding exclusive manufacturing space.

**Q:** Can the process provide a consistent, uniform coating?

**A:** The distinct advantage of the coil coating process is its ability to provide a uniform, consistent coating. Painting metal in the flat allows for consistency in film application and color uniformity.

**Q:** Can you paint both sides at once?

**A:** Yes. Coil coaters paint both sides of the coil at once. The coating process on a coil coating line is very flexible, allowing the application of many different types of primers, solid color finishes and top coats.

**Q:** Can you put two coats of paint on in one operation?

**A:** Yes. Actually, you can put four different types of paint on in one operation: primer on both sides of the coil, a finish coat on the top side, and a wash coat on the back side. If desired, it is possible to apply two different types of paint in the primer station on the back and top side, cure the first coat, and then apply two completely different paints on the top and back sides.

**Q:** What colors are available?

**A:** There are a wide variety of paints available: polyesters, polyurethanes, zinc-rich coatings, epoxies, fluorocarbons, silicone polyesters, and more. A wide range of colors and glosses are available to meet customer needs.

**Q:** How do you control the color match from batch to batch?

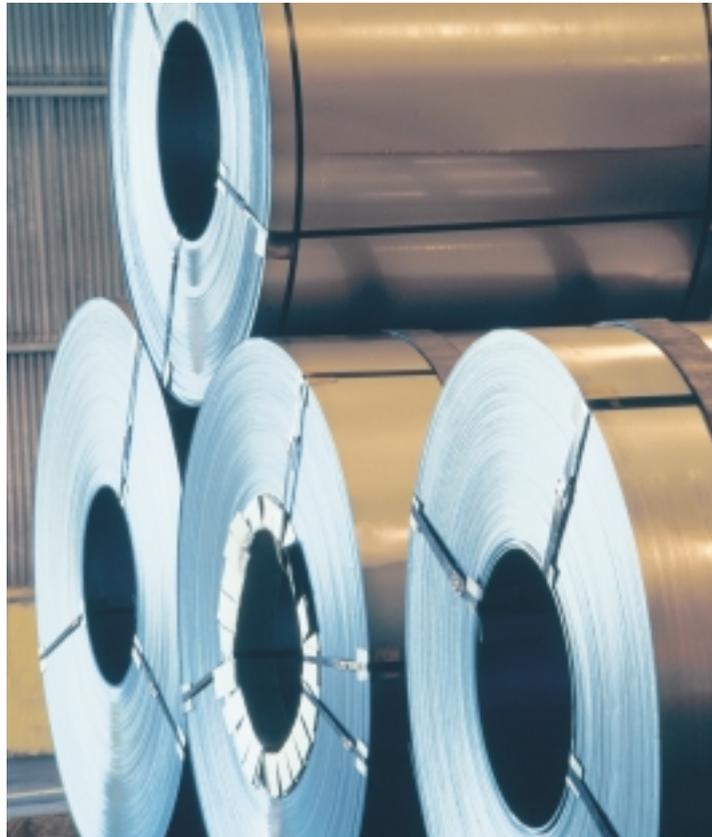
**A:** The color control from coil to coil and run to run is one of the distinct advantages of the coil coating process. Metal is coated in the flat, and because of the roll coating process, it is possible to lay down a smooth and uniform film. Laboratories and paint companies that supply coatings have developed ways to maintain film control at a variety of thicknesses that are very reproducible. Line results are very consistent, and coaters have the ability to coordinate lab conditions with line conditions to control the incoming raw materials for consistency.

**Q:** Can you bend it?

**A:** Yes. Since the metal is painted in the flat and rewound into a coil, it is ready to be formed into the ultimate part. You can bend it, shape it, punch it, and more.

**Q:** What do you do with the bare edge?

**A:** This has been the most frequently asked question of coil coaters throughout the years. There are several approaches to answer the question. If it is an aesthetic issue, it can be hidden, folded, roll formed, or tucked away so that the bare edge can be kept out of sight. If there is concern about performance (such as fear of corrosion because of bare edge), it can be roll formed to take it out of a corrosive envi-



Control of color from run to run is one of the advantages of prepaint. Coaters control incoming raw materials for consistency.

ronment. It is important to note, however, that pre-painted material, even with bare edges, has shown better corrosion resistance than postfinished product because of the cleaning and pretreatment the metal undergoes before painting.

**Q:** What equipment changes are necessary?

**A:** Minor changes may be required in order to get the most value out of a conversion to prepaint. The most common changes are die clearances, depending on the product being made. If it is a brake press product, dies might need to be adjusted to allow for the additional film that exists with paint on both sides of the product. It's also a good time to evaluate potential manufacturing process changes, such as steps that can be eliminated and where time and money can be saved moving a product through the manufacturing cycle faster when utilizing prepaint.

**Q:** Do I have to change my current tooling?

**A:** In most cases, you don't have to change tooling but you may have to make a few adjustments. Dies should be polished and die clearances adjusted to fit pre-painted metal. Prepaint serves as a lubricant, and when you use prepaint, you actually get extended tool life. It is recommended that tooling be devoted only to pre-painted material versus moving back and forth between bare material and pre-painted materials. If the customer processes bare metal, the raw material has not been cleaned and carries roll oils and metal fines. Therefore, it is

not wise to move bare material and prepaint on the same equipment.

**Q:** How do you fasten preprinted metal?

**A:** There are a variety of ways to fasten preprinted metal. The National Coil Coating Association has created a booklet on ways to fasten preprint, including mechanical fasteners such as screws, bolts, rivets, adhesive bonding, welding, crimping, lock forming, self forming, piercing rivets, Tog-L-Lok" systems, and more. Contact NCCA for more information.

**Q:** How do I transport, store and handle preprinted metal?

**A:** Sound manufacturing techniques make preprint no more difficult to transport, store and handle than other material. The NCCA specifically addressed this issue in a report, "Receiving Preprinted Metal Into Your Plant." Contact NCCA to secure a copy.

**Q:** How can I handle preprinted metal without damaging the finish?

**A:** There is no need to be fearful of handling preprinted metal. Sound traditional manufacturing techniques should prevent damage to the product in normal production. It is important to remember that preprint is a finished product and should be handled as any finished product would be handled.

**Q:** Will preprint scratch during forming?

**A:** Sound manufacturing practices, including proper handling, make preprinted metal no more susceptible to damage

than finished products. It is recommended, however, that tooling be dedicated to preprint. The use of bare and painted material on the same tools can cause scratching of the preprinted metal. There are many proven, simple techniques that can be employed to prevent damage, should it occur. Again, refer to NCCA'S "Receiving Preprinted Metal Into Your Plant" document.

**Q:** What about touch-ups?

**A:** Touch-ups are significantly reduced or eliminated. If touch-ups are needed, something is wrong in the manufacturing process. Should transit or installation damage occur, there are repair paints available from the original coating manufacturer, as there are with postpainted products.

**Q:** Are there cost savings associated with making the change?

**A:** There are not necessarily cost savings associated with the change, but cost savings enabled by the change that need to be reviewed. In other words, some of the greatest benefits will be derived in other areas of manufacturing. The use of preprint solves manufacturing issues by increasing productivity, reducing manufacturing cycle time, providing faster throughput, producing better yields, and reducing environmental problems.

The National Coil Coating Association (NCCA) encourages industry professionals to work with its Cost Justification Brochure to analyze all of their processes and associated costs to understand the value of using preprinted metal.



To properly evaluate cost benefits of preprinted coil, buyers must look at the impact on the entire manufacturing operation.

**Q:** But it must be more expensive?

**A:** To truly understand costs involved, the customer must look at the big picture and look at the total cost versus just the cost of eliminating in-house painting. Often, the mistake is made to evaluate costs where the paint line begins and ends, instead of the entire manufacturing operation. The paint line is often the bottleneck in the manufacturing process, so you have to look at all the ancillary and supporting costs for the paint line, including time and effort to create materials to be painted at the paint line in order to do a complete cost analysis. The National Coil Coating Association (NCCA) Cost Justification Brochure is a good starting point to assist the customer in analyzing costs.

**Q:** What is the minimum quantity I have to order?

**A:** Your order depends on your supply source. Typically, truckload orders or truckload quantities would best fit the bill. However, preprinted metal can be produced to any size order. The larger

the order, the lower the cost per pound.

**Q:** Who supplies the metal?

**A:** In most cases, your current suppliers can supply the pre-painted metal package. Prepaint is generally sold as a single invoice package. In other words, your current suppliers will contract with a coater who will specify the paint systems and be responsible for the uniform application of the customers' paint requirements. Beyond your current supplier, there are a variety of sources available from which you can buy pre-painted metal, such as the major mills and metal service centers. Contact the National Coil Coating Association for a list of its members to start locating suppliers.

**Q:** Can I depend on supply?

**A:** Yes. The coil coating industry has the capacity to meet ever-growing demand for prepainted metal.

**Q:** How am I going to make this change?

**A:** You can create a team with the customer organization and work with a National Coil Coating Association member.

**Q:** How long does it take to convert to a pre-paint system?

**A:** The majority of time is spent developing and understanding the requirements of the painted product. Once the requirements are fully understood and agreed to by all members of the team (which should include the metal supplier, coater, paint supplier, and key customer representatives), a small trial run is done to confirm that the system, which includes the metal, paint and treatment, meets customer requirements. Once the qualification process is complete, the conversion to pre-paint can take place, and the current paint system can be eliminated. Depending on requirements, this transition can last anywhere from 60 days to one year.

**Q:** Is technical assistance available?

**A:** Yes. The National Coil Coating Association is the first choice for technical assistance and manuals to assist the customer in a conversion to pre-paint. NCCA, through its members, supports conversions to pre-paint. Assistance is available from steel companies, metal service centers, coil coaters, paint companies, metal treatment professional, and an extended family of support companies who process prepainted metal.

## Getting the Most From Coil Coating

When manufacturers work with coil coaters, they have a wealth of information and services available at their fingertips from experts in the supply chain of this growing industry.

To make sure you get exactly what you need and are able to gather all the information needed to ensure the most efficient use of your investment in coil coating, arrange to meet or talk with all of the "players" in the coil coating supply chain.

These include the substrate manufacturers, paint manu-

facturers, and the coil coaters. Substrate manufacturers understand the mechanical properties and corrosion properties of their base materials. Paint manufacturers understand the types of paint required for specific products in terms of the different attributes the paints are required to have. The coil coaters understand how to bring all of these needs together.

When the manufacturer, the product designer, the coil coater, and the raw material manufacturers all work together, "success stories" tend to occur.

### For more information:

"Coil Coating: A One-Process Solution"  
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