

Traveling Demonstration Unit for IR/UV Powder Coating and Curing Processes



Curing paint and other finishes with infrared and ultraviolet light provides higher-quality products and fabrication that is environmentally sound.

Today's tighter operating margins and increasing global competition require materials fabricators to cut costs while improving plant productivity, product quality, and energy efficiency. In addition, federally mandated reductions in the volatile organic compounds (VOC) content of paints, bans on some solvents, and problems associated with the disposal of hazardous waste put these manufacturers under constant pressure to use cleaner coating processes. Although new technologies such as powder coatings are meeting these needs, the search for more efficient and economical finishing methods continues.

Fabricators have expressed considerable interest in a new finishing technology that uses a combination of electric infrared heating and ultraviolet light (IR/UV) to cure powder coatings. The EPRI Center for Materials Fabrication is collaborating with suppliers of coatings application systems, IR/UV curing equipment, and UV-curable powder coatings to promote this new technology as a VOC-compliant alternative for metal, plastic, and wood substrates. The technology allows fabricators to meet environmental standards, increase production line speeds, and reduce overall finishing costs.

Provides Metal, Plastic, and Wood Substrate Fabricators With Advanced Electrotechnologies for Coating and Curing Their Products

As an energy service provider, you can help your materials fabrication customers address the need for new finishing technologies by participating in the EPRI *Traveling Demonstration Unit* (TDU) project opportunity. The project offers on-site demonstrations, while leveraging EPRI resources.

PROJECT SUMMARY This project connects your industrial finishing customers to advanced electrotechnologies that can help them meet their competitive challenges head-on. At the heart of the project is the EPRI TDU, a self-contained facility housing equipment for coatings application and recovery, conveyors, and a combination electric-IR/UV curing oven. The unit will make a one-week visit to the site of your choice to demonstrate the powder coating and IR/UV curing of customer or sample parts. Technical support is provided by EPRI and also from suppliers of coating materials and IR/UV curing equipment.

DELIVERABLES

- One-week demonstration of the EPRI TDU at your site
- Transportation of the unit to the site
- Technical support from suppliers and EPRI
- All coating materials

RETURN ON INVESTMENT The industrial finishing industry is an enormous user of energy, with more than 20,000 industrial painting operations in the United States consuming in excess of 4 trillion Btus of energy per day to clean and dry parts, and to dry and cure coatings. Gas convection ovens are used to dry and cure coatings more

than 90% of the time. This represents a substantial opportunity for the introduction of new coating and curing electrotechnologies, which use less energy and require less floor space than the gas-fired ovens. These new technologies will also contribute to increased productivity and a reduction in overall operating costs at customer facilities.

Your involvement in this project opportunity will help you retain industrial finishing customers, while attracting new ones. Direct access to advanced electrotechnologies pioneered by EPRI will extend the expertise of your staff, providing solutions to real customer problems. And, your customers will get a jump on the competition by participating in EPRI demonstrations. They will have the opportunity to implement cutting-edge technologies before the products are widely commercialized.

DEMONSTRATED VALUE Only EPRI has the diverse resources necessary to position your company to win customer loyalty in today's increasingly competitive energy services market. EPRI's broad knowledge of energy customers, changing markets, and international developments can help you anticipate and shape the changes that are transforming the energy industry along with the needs of your customers.

For nearly 30 years, EPRI has been at the leading edge of market insights and technology development, delivering a wide range of products, support, and services. In 1997, the company managed \$428 million in collaborative technology development and demonstration projects. EPRI has created an unparalleled network of technical experts, research allies, manufacturers, industry representatives, and marketing specialists from around the world. As an objective source, EPRI can seek the best technology, vendor, and fit for your particular needs.

PRICE OF PARTICIPATION The cost to host a one-week demonstration of the EPRI TDU is \$3500. Additional weeks can be purchased at \$2500 per week. The cost covers transportation of the unit to your demonstration site, manpower for conducting demonstrations, and all coating materials. Participants are responsible for any local costs, including electricity for the unit and hospitality for demonstration attendees.

PROJECT STATUS AND SCHEDULE The project will take place over a six- to twelve-month period beginning in 1999, during which time the EPRI TDU will make approximately 25 week-long stops at locations around the United States. EPRI will coordinate a schedule with you, so you can make plans to accommodate and demonstrate the unit at the site of your choice.

CONTACT INFORMATION

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