

International **METAL DECORATOR**

We were ready to go to press with the first quarter issue of this newsletter and the world changed as we knew it and so did the content of the original copy of the newsletter. While we were gearing up for our Annual Conference in May and touting all of the good things in store for those in attendance, detrimental health and safety developments out of our control were underway. The tenor of our days changed. Your Association leadership found themselves, like all of you, adjusting behaviors and thought processes. IMDPA leadership realized the plans for association activities needed to change to protect the industry. Consequently, we found it prudent to cancel our May Annual Conference. With the wheels of planning screeching to a halt, contracts and speaking engagements changing, and communications to the industry about the cancellation ensuing, we were not done. We had to reverse the previous actions taken to reconstruct the future actions to be taken. And we have done so. We reached out to speakers and committee members to seek their engagement for helping with next year's Annual May Conference and have overwhelming support already. We are moving forward not only with next year's Conference, but also keeping our current year's IMDPA traditions alive.

We will be presenting the Annual Memorial Golf Scholarships in June, we extended the Excellence in Quality entry deadline until June 15 and awards will be announced in July. Our Decorator of the Year nominations have been received and we will award those during the 3rd quarter and last, but not least, our Member of the Year will be presented in October.

For those engaged with social media, we are stepping up our activity level of posting and sending eblasts to keep you informed on Association activities in a more rigorous fashion.

This is the year for the changing of the guard. We are involved with the process of changing the IMDPA leadership and will be announcing the new slate of Officers and Board members to you to obtain your approval later in the year. Stay tuned.

We are adjusting to our new normal for the time being to keep your Association active, strong and viable. Our normal has always been to continue to do so and that we will. In doing so, we ask if there are particular areas where you feel that we could be of benefit to the industry beyond our current offerings, we would encourage you to share your ideas by emailing info@metaldecorators.org.

Stay safe and be well.

In This Issue

Membership News

Info Hub Basics

Maintaining A Healthy UV Curing System

Education Update

Excellence in Quality

Resource Directory

2020 OFFICERS & DIRECTORS

President

Dr. William Hoyle, Hoyle Consulting* Vice President Renee Schouten, INX International Ink* Secretary Treasurer John Clark, Heraeus Noblelight America Executive Director Michael Masenior*

Directors

Bob Blandford, Miltec UV Sam Courtney, VN Graphics Tim Duca, Ardagh Group Craig Eberts, Honorary Member* Paul Fennessy, Crown Cork & Seal Joe Finan, INX International Ink Co.* Mark Finch, Silgan Containers John Friedman, Northern Container Eugene Furey, Honorary Member* William Graue, Honorary Member Nick Hammer, Trivium Packaging Janelle Harris, Past President* Jim Hogan, Ardagh Group Kyle Hurla, INX International Ink Co. Art Hurley, Silgan Closures* Sarah Jacks, INX International Ink Co. Jack Knight, INX International Ink Co.* Kenneth Matyska, Honorary Member* Ted Nevins, Ball Metalpack Neal Santangelo, Urethane Roller Specialists* Allan Sayers, Sayers Publishing Phil Shaughnessy, Crown Cork & Seal Steve Steerman, Ball Corp Mark Von Bokel, SGS International Henry Watson IV, Sherwin-Williams Co John Wise, Metal Container Michael Yavorski, Sherwin-Williams Co*

* Executive Committee Member



IMDPA COMMITTEES & CHAIRS

Conference Chair Renee Schouten Scholarship Golf Chair Kvle Hurla **Newsletter Chair** Michael Masenior Website Chair Renee Schouten Social Media Chair Michael Masenior **Membership Chair** John Friedman **Decorators of Year Chair** Kvle Hurla Scholarship Chair Gene Furey **Excellence in Quality Chair** Michael Masenior **Technical Resource Chair** Steve Steerman **Nominating Chair** Mike Yavorski **Education Chair** John Clark

> IMDPA P.O. Box 992 Sykesville, MD 21784 USA

Physical Address: 1210 Creekside Court Sykesville, MD 21784 USA Tel: 410-252-5205 Email: info@metaldecorators.org Website: www.metaldecorators.org



DecoDates

November 9-11, 2020 Asia CanTech Ho Chi Minh City, Vietnam www.asia-can.com

February 23-27, 2021

Metpack Messe Essen, Germany www.metpack.de

April 20-30, 2021

Drupa Dusseldorf, Germany www.drupa.com

May 25, 2021 IMDPA Golf Outing

Hilton Oak Brook Hills Resort Oakbrook, IL USA www.metaldecorators.org

May 26-27, 2021

IMDPA Conference Hilton Oak Brook Hills Resort Oakbrook, IL, USA

www.metaldecorators.org

MEMBERSHIP STATISTICS

(as of March 1, 2020)

MEMBERS 514
NEW
BENBENBENBENBENBENBENBENBENBENBENBENBENB
สถามการการการการการการการการการการการการการก
HONORARY 25
BENBENBENBENBENBENBENBENBENBENBENBENBENB
1807-1807-1807-1807-1807-1807-1807-1807-
PRIVILEGED 20
ISON ISON ISON ISON ISON ISON ISON ISON
TOTAL 559

PACKAGING IN CANS? DESIGNING FOR CANS? DECORATING ON CANS?

Get to market quicker with the INX Color Catalog

The INX 2-Piece Metal Color Catalog is the industry's only true color standard for 2-piece can design.

The Advanced Color Communication tool contains over 600 removable color swatches printed on metal, not paper. Brand owners, designers, and metal decorators have a true representation of color and can select, communicate, and approve color efficiently, reducing lead times and getting to market quicker.



Complete Color Communication Package





Metal Swatch Catalog

Digital Color Library

Learn more by visiting inxcolorperfection.com





EXCELLENCE IN QUALITY



Entry Deadline has been Extended to June 15th

Start to gather your award winning metal decorated products to enter our 24th Annual Excellence in Quality Showcase and Competition.

Entries can be entered into the 8 categories of products being judged: Aerosol & Bottles, Closures and Ends, Craft Cans, Digital Printing, Food & General Line, Misc. Products, Specialty & Fancy Cans, Two Piece Beverage and Canmaking Innovation.

Entry forms are available on our website in the event section and forms will also be mailed to canmaking and decorating companies.

Awards will be announced in July, 2020.

Thank You to the following 2020 Quality Showcase Sponsors







Heraeus









MACHINE & TOOL CO.

Of Excellence

Member Briefs

Social Media

We have increased our social media and electronic communication efforts. You can find us on the following:

Facebook: IMDA Twitter: metaldecorators Instagram: metaldecorators LinkedIn: International Metal Decorating & Packaging Association

We are also continuing to communicate through our Constant Contact eblasts to keep you updated.

Education on Metal Packaging

Check out The Packaging School.com's Metal Packaging Course at packagingschool.com

Future Newsletter Publications

Request for Articles

Following are the dates of future publications and featured topics.

Second Issue 2020 (copy due June 1, 2020) **Topics: Scholarship Awards Quality and Vision Systems**

Third Quarter 2020 (copy due August 3, 2020) Topics: Decorators of the Year Excellence in Quality results Press and Canmaking equipment

Fourth Quarter 2020 (copy due October 15, 2020) **Topics: New Leadership Board meeting Minutes**

All issues will include Technology papers. Please submit by the respective due dates. Send your submissions to info@metaldecorators.org or call 410-252-5205 for more information



STEP 1 The hub stays on the machine for safer change-outs & reduced change-out time.

STEP 2 Remove & replace our light weight high performance sleeve. (17.5", 20" & 24" diameters and widths to 8.25")

STEP 3 Remove only the precision machined load plate to change sleeves.

863.682.2444 www.finzerroller.com

- hubs to handle every time
- New, improved load plate design
- Reduces shipping cost Patent 9 341 213

inker rolls • overvarnish sleeves • bottom varnish rolls • sleeves • pre-spin rings • release coatings



THE IMDPA MEMBERSHIP SOFTWARE SYSTEM EXPLAINED.

We installed the new membership software system in 2019 and many of you have used it to pay dues and register for our Conferences. However, there is much more to this system and we encourage you access your portal through our website in the member section to see its features.

The Info Hub is an online password-protected community for our members. It is a hub for daily interactions, allowing members to easily access our membership resources and benefits. It's accessible to our members via the "Member Login" link on our website.

A FEW INFO HUB FEATURES





RESOURCE LIBRARY

Post videos, links, and other member-specific documents in one place to share with members.

GREEN VALLEY	(been	Base (Concerning the	m.:	1
A linear in	See.	i la company	- Ginkedt	
()	No. Area	\$44(-1)(00)		
- Antone	Profession 1	(mt) -	101100	
	-	(m.)	THE REPORT	
- China -	(records)	Terr	developed.	
SER Subtransmith				
E trans				
A Wylers				
Carelinularra:				









Members can easily update contact information, upload their photos, and choose preferences and other account settings.





Maintaining a Healthy UV Curing System

Is your UV curing system not performing as it should? Are you constantly replacing over-heated lamps? Maintaining a healthy UV curing system is crucial to obtaining successful results in curing and saving money by reducing unexpected down time caused by poorly maintained UV equipment. There are five main ingredients that make up a healthy UV system. These include proper lamp cooling with adequate airflow, power supply maintenance, proper light shielding, maintaining the reflector condition, and lamp maintenance. Paying close attention to each one of these may solve existing ongoing problems with your UV curing process, or it may prevent curing problems that you would likely experience with your UV curing equipment. The five topics that will be discussed apply to both arc lamp UV systems and microwave powered (electrodeless) UV lamp systems.

Cooling and Airflow

It is critical for virtually all UV curing lamp systems to maintain proper air-cooling s delivered to the lamp to ensure a heathy UV curing system. UV lamps operate at very high temperatures (at around 800°C or 1,500°F bulb surface temperature) in order to maintain a consistent fully developed mercury plasma state inside the UV bulb. <u>More advanced UV lamp systems</u> require a cooling system that not only maintains the lamp stability in that range, but also protects the integrity of the metal structure in which the lamp is operating. The most common method to cool a UV lamp is with air flowing through its housing and across the UV bulb and reflector. However, there are several things that are important to consider when designing a proper air-cooling system for UV lamps in order to ensure good consistent UV output and long life of your UV bulbs.

UV lamps do have a "cooling window" when it comes to proper air cooling. They can be over-cooled or under-cooled. To make it a bit more complicated, the required amount of air cooling that is to be delivered past the UV bulb will depend on the power level you operate the UV lamp. Most modern UV lamp systems are powered by variable power ballasts, which can deliver a power range from 20% to 100% power to the lamp. Such a wide power adjustment range will allow the lamp to be changed from about 130 Watts/inch up to about 650 Watts/inch. For some UV systems, the power setting is adjusted by the front panel controls, but for other more sophisticated UV systems, the lamp power is automatically adjusted as a function of line speed via a 0-10 VDC or 4-20 milli-amp signal provided by the customer. As the lamp ramps up in power, it requires more cooling air delivered past the UV bulb to prevent the UV bulb from over-heating. Conversely, as the lamp power is reduced, the cooling air must be reduced to ensure the lamp is not overcooled. Consequently, to avoid lamp cooling problems, it is essential that the cooling system must adjust automatically to match the lamp power and heat load to maintain stability of the lamp and ensure that it operates within its proper temperature range. Lamps that operate in an "over-heated" condition will result in shortened lamp life and possible lamp swelling or warping, which adversely affects the UV output. Lamps that operate in an "over-cooled" condition will suffer from shortened lamp life and low UV output as well. When a lamp is over-cooling, it cannot develop the correct voltage and the current (amps) remain high, putting adverse wear on the electrodes over time. In most cases when the lamp is over-cooled, the mercury plasma will begin to become unstable and the lamp will inadvertently extinguish. Only when a lamp is operating within the correct cooling parameters consistently will maximum lifespan of the UV bulb be realized, as well as consistent UV output from the UV bulb be achieved.



Overheated Lamp

Reflector Condition

Another critical part of any UV system that must be maintained in order to ensure a healthy UV curing system is the condition and performance of the reflector, which typically is in the shape of a semi-elliptical or parabolic geometry that wraps around the upper half of the bulb and runs the full length of the UV bulb. The Lamp reflectors are an important part of the UV lamp system because they are typically responsible for reflecting about 65% of the UV energy emitted from the UV bulb to the customer's product. When the reflectors are not cooled properly, they can warp and wrinkle as a result of thermal expansion. The photo above shows what an overheated reflector looks like. Reflectors that lose their nice curved shape will cause the light ray pattern that reflects from the reflector toward the customer's product to become scattered or diffused, which will negatively impact its ability to cure. The graphic below shows two conventional light ray patterns that are used in most UV curing systems. Therefore, it is essential that the curved shape of the reflector does not change during lamp operation in order to maintain these UV light ray patterns. The curved shape of the reflectors are typically designed to concentrate (or focus) the light rays to a very small area creating extremely high UV peak irradiance at the customer's product, which is one of the keys to UV curing.

In addition to maintaining the desired reflector curve, routine maintenance to the reflector is also extremely important. When the reflectors become dirty, contaminated, or dulled over a period of usage, the % reflectivity will reduce significantly, which will reduce the UV energy and intensity that is delivered to the customer's product. Poor reflector conditions will result in customers producing un-cured product. The reflector is considered a consumable part for all UV systems, and is considered a component that requires attention and maintenance (or periodic cleaning) to help ensure good consistent UV output from the UV lamp system. Some UV systems use replaceable reflector liners, which are normally a thin polished aluminum material with a protective coating (which looks much like a conventional mirror finish) and typically pre-curved and cut to fit into a reflector holder inside the lamp housing. Other more sophisticated UV lamps use "cold mirror" reflectors, which are also thin, pre-curved and cut aluminum or glass reflectors that are held in a holder of some type inside the lamp housing. Cold mirror reflectors have special coatings applied to the reflective side of the reflector substrate that are designed to efficiently reflect UV light but absorb the IR energy (heat) emitted by a UV bulb. Cold mirror reflectors will reduce the heat load on the customer's product as it travels under the UV lamps. Other less sophisticated UV systems use a polished aluminum extrusion as the reflector, which is curved around the UV bulb and acts as a reflector and a lamp shutter. Regardless of the reflector type, it is important that the reflector condition is maintained to be a clean with a shiny appearance. If the reflector begins to look dull or dirty, that's an indication that it needs to be either cleaned or replaced. Reflectors can be cleaned using a lint free cloth and isopropyl alcohol or a surface cleaner that does not leave a film. Cleaners that contain ammonia are not recommended. If after cleaning, the reflector still appears to be dull or dirty, then it should be replaced. In almost all cases, a dirty or dulled reflector will have more impact on UV output reduction than an old & poor performing UV bulb. Measuring your UV output will also help diagnose a poor performing reflector. The best device that is available to measure UV output is a "puck" style radiometer that measures UV light energy in all 4 UV ranges: UVA, UVB, UVC, and UVV. The puck style radiometer is placed on the conveyor belt and run under the UV lamp at some pre-defined constant speed, and it will measure the total UV energy delivered by the lamp. When the UV energy reduces to a point where you are in danger of not achieving proper cure, then it is most likely time to clean and/or replace the lamp reflector.



The reflector provides over 65% of the energy seen by the substrate

Lamp Maintenance

Routine lamp maintenance is also key to maintaining a healthy UV curing system. Most UV lamps operate in industrial environments, which are typically less than ideal conditions. It is important to try to keep the lamp as clean as possible to help ensure consistent UV output and prolong its useful life. Neglected lamps will age and fail prematurely, as well as suffer from low UV output. The simplest way to keep your UV bulbs clean is by cleaning them with a <u>designated UV glass bulb cleaner</u> and a lint free cloth. Some UV bulbs need to be cleaned often and some less often. The frequency of needing to clean the UV bulbs will vary depending on the environment in which they are operating. Dirty and contaminated UV bulbs that operate for prolonged periods of time are more prone to overheating, and then swelling or warping. If a UV bulb swells or warps, this will negatively impact the UV peak irradiance output of the lamp and curing performance of the UV lamp system. Once a UV bulb appears swollen or warped, this is a sign that the UV bulb should be replaced. If air filters are used to help keep the lamp cooling air clean (which is common for microwave powered UV lamp systems), then it is important to change these filters on a periodic basis to help ensure the lamp cooling air delivered into the lamp housing and passed the UV bulb (& reflector) is clean. Maintaining clean air filters will also help ensure that the volume of air delivered to the lamp is maintained within the required specification. Operating a UV lamp system with dirty & clogged air filters will almost always result in over-heated UV bulbs and a significant reduction in UV bulb life, and this will cause you to change UV bulbs much more frequently.



Dirty, overheated lamps drastically reduce UV output

Power Supply Maintenance

Let's move onto the next reason why maintaining a healthy UV curing system is important, power supply maintenance. The heart of any UV system is the expensive power supply which drives the UV lamp. Whether a conventional iron core ballast or a solid-state power unit is used, the proper volume of filtered cooling airflow delivered to the ballast is critical to the health and life expectancy of any ballast and other electrical components inside the ballast enclosure. <u>Power supplies</u> operating in a dirty or over-heated environment will deteriorate or fail prematurely, resulting in low UV output or lost production. Making sure you maintain a clean air filter and the proper amount of air flow to the ballast will ensure your ballasts are properly cooled and kept clean. Air filters should be replaced as often as needed, depending on the environment. In the event the ballast and other internal power supply components (such as capacitors) become coated with dirt or dust (like shown in the photo below), it is highly recommended to do two things:

- 1 Check the air filter and replace it if needed.
- 2 Blow out the ballast and all other internal components with clean dry compressed air, and then vacuum out the settled dust.



Dirty, overheated power supplies

Light Shielding

The last ingredient to maintaining a healthy UV curing system involves the light shielding. The primary purpose of light shielding is to protect personnel from any direct UV light exposure. Good light shielding in and around the UV lamp housing will protect the lamp module components and the production machine to which it mounts. A properly designed light shield will prevent any machine hard-ware near the UV lamp from reaching unsafe temperatures or deterioration from direct UV exposure. The secondary function of the light shield is to support the UV lamp housing in a manner in which it will efficiently cure the customer's product. If the light shielding gets removed from the machine for maintenance to the production equipment, it is critical to install the light shielding in the same position and location on the machine to ensure the lamp is positioned in the correct location and orientation with respect to the customer's product that is being cured. The third function of the light shield is its contribution toward good air cooling. Some light shields may have air intake vents or air louvers to allow for air to enter the inside the light shield for lamp cooling, substrate cooling, and/or light shield, and the customer's substrate. The result can be poor lamp performance, short bulb life, or overheating the customer's substrate. Therefore, part of the routine preventive maintenance schedule should be to periodically clean out these air intake vents (or louvers) on the light shield with brushes and a vacuum, or by blowing them out with dry compressed air.



Poor Light Shielding

This article has clearly explained the five keys to maintaining a healthy UV curing system, which include: proper lamp air cooling, power supply maintenance, proper light shielding, maintaining good reflector condition, and performing routine lamp maintenance.

For further assistance with solving your UV issues, <u>contact Miltec UV</u>. Our service department plays an important role in helping our customers maintain their UV equipment properly, as well as helping our customers troubleshoot technical problems with virtually all UV equipment. The Miltec UV team is committed to helping you understand UV curing and address UV process related questions and issues. We possess the expertise to answer questions and help solve problems. Furthermore, we offer customized UV system training for our customers including material required for a wide range of training goals, including basic to advanced UV curing equipment maintenance, UV measurement, and <u>microwave and arc lamp technology</u>. In the event you are in need of a new UV system, we can assist with that as well. Miltec manufactures the highest output and most user-friendly UV system that is available in today's UV curing industry. Miltec can offer arc lamp UV systems, microwave powered UV systems, as well as LED UV systems. We are your one-stop shopping source for all of your UV needs!

Written by: Bob Malone and John Phillips- Miltec UV



UV PROCESS DEVELOPMENT

ARC · MICROWAVE · LED



THE POWER OF EXCELLENCE Miltec UV · sales@miltec.com · Stevensville, MD-USA · www.miltec.com

EDUCATION COMMITTEE



Education Committee Update

Co-Chairs : Sarah Jacks - INX International & John Clark – Heraeus Noblelight America Committee Members: Mike Grady , SGS International & Emily King, SGS International

The newly formed Education Committee continues to make progress with partnering with prominent packaging schools. Our goal is to build interest and engage students interested in careers in the packaging industry to choose "Metal Packaging" as a possible career path.

We have organized the first ever IMDPA Student Packaging Design Competition that will showcase student designs focused around the 2-piece beverage category. This will provide students in the Graphics Arts and Packaging fields a glimpse of what the metal packaging industry entails. Entry into the competition will provide students with an opportunity to display their talent as well as creativity to industry leaders in the metal decorating field. To date, we have received entries from University of Wisconsin, Stout and Clemson University. Other schools were wishing to participate but the COVID 19 shutdown prevented them from participating.

The current entrants will compete for the inaugural "Bill Coors Award" and scholarships sponsored by the IMDPA. We originally planned to present the awards during our May Conference but since delayed the announcement of the awards until the summer months of 2020. Industry leaders will serve as judges for the event, providing another opportunity for students to make contact with Metal Packaging Industry Professionals. We will publish the results through our social media sites and in the future newsletter issues.

Sincerely, IMDPA EDUCATION COMMITTEE



AIR POLLUTION CONTROL

Anguil Environmental Systems 8855 N. 55th Street Milwaukee, WI 53211 USA Tel: +1 414-365-6400 www.anguil.com

Babcock & Wilcox Megtec Systems 830 Prosper Street De Pere, WI 54115 Tel: 920-337-1505 www.megtec.com

Catalytic Products International

980 Ensell Road Lake Zurich, IL 60047 847-438-0334 www.cpilink.com

Environmental Services & Technologies

4941 41st Street Moline, IL 61265 USA Tel: 309-762-9551 www.envsrv.com

Epcon Industrial Systems PO Box 7060 The Woodlands, TX 77387 Tel: 936-273-3300 epcon@epconlp.com

Pro-Environmental, Inc 10134 6th Street, Suite K Rancho Cucamonga, CA 91730 Tel: 909-898-3010 www.pro-env.com

ANILOX SYSTEMS

Art International 16745 Cagan Crossings Ste 102B-69 Clermont, FL 34714 Tel: +1 831-295-2969 anilox@me.com

John M Travis Ltd

27031 Trinity Heights San Antonio, TX 78261 Tel: 740-407-0685 www.travisltd.com

BLANKETS

DYC Supply 5740 Bay Side Road Virginia Beach, VA 23455 USA Tel: 800-446-8240 www.d-y-c.com Package Print Technology

1831 Niagara Street Buffalo, NY 14207 USA Tel: 800-382-8851 www.packageprinttech.com

Trelleborg Printing Solutions 5680 Commerce Blvd Morristown, TN 37814 Tel: 339-236-5745 www.trelleborg.com

BODYMAKER Spare Parts

Beckon Worldwide Inc 455 E. Clinton Place St. Louis, MO 63122 USA Tel: +1 314-965-0755 www.beckonworldwide.com

CHEMICALS & MATERIALS

Coral Chemical Company (see Lubricants & Cleaners)

Grace Davison Materials & Packaging 7500 Grace Drive Columbia, MD 21044 USA Tel: +1 410-531-4000 bryan.t.pugh@grace.com

Henkel Corporation 32100 Stephenson Hwy Madison Heights, MI 48071 Tel: +1 248-577-2243 www.henkelna.com

COATINGS

AkzoNobel Packaging Coatings 16651 Sprague Road Strongsville, OH 44136 USA Tel: +1 440-297-5589 www.akzonobel.com

PPG Industries 500 TechneCenter Drive Milford, OH 45150 Tel: +1 513-576-3100 www.packagingcoatings.com

Prime Coatings 1002 Hickory Street Pewaukee, WI 53072 USA Tel: +1 262-691-1930 www.primecoatings.net

RESOURCE GUIDE

The Shewin-Williams Co.

2001 Tracy Street Pittsburgh, PA 15233 USA Tel: +1 412-766-9300 packaging@valspar.com

Watson Standard 616 Hite Road Harwick, PA 15049 USA Tel: +1 724-275-1000 www.watsonstandard.com

COATING APPLICATION SYSTEMS

Nordson Corporation 300 Nordson Drive Amherst, OH 44001 Tel: +1 440-985-4000 www.nordson.com/container

COATING, PRESS 2 PIECE ROLLERS

Finzer Roller, Inc 129 Rawls Road Des Plaines, IL 60018 USA www.finzerroller.com

Pacesetter Graphic Service Corp. 2672 Hickory Grove Road Acworth, GA 30101 www.pacesetterusa.com

Rollercoat Industries 10135 Hwy 62 East Tampa, FL 33610 USA Tel: 800-248-4351 www.rollercoat.com

Urethane Roller Specialists 100 S. Central Ave PO Box 566 Eureka, MO 63025 USA Tel: 800-367-1136 www.urethaneroller.com

CONSULTANTS

Beckon Worldwide, see Bodymaker spare parts Environmental Services & Technology see Air Pollution Control

DAMPENING SYSTEMS

Epic Products International 2801 E. Randol Mill Road Arlington, TX 76011 USA www.epicproducts.com

RESOURCE GUIDE

INDUCTION HEATING

Ajax Tocco Magnethermic 1745 Overland Avenue N.E. Warren, OH 44483 USA Tel: 330-372-8552 www.ajaxtocco.com

INKS

Chromatic Technologies, Inc 1096 Elkton Drive, Suite 600 Colorado Springs, CO 80907 USA Tel: +1 719-592-1557 www.ctiinks.com

INX International Ink Co 10820 Withers Cove Park Drive Charlotte, NC 28278 USA Tel: +1 704-372-2080 www.inxinternational.com

Sun Chemical 135 W. Lake Street

Northlake, IL 60164 Tel: 708-236-3798 www.sunchemical.com

LUBRICANTS & CLEANERS

Chemtool Incorporated 8200 Ridgefield Road Crystal Lake, IL 60039 USA Tel: +1 815-459-1250 www.chemtool.com

Coral Chemical Company

1915 Industrial Ave. Zion, IL 60099 1-847-246-6666 www.coral.com

JAX Inc

W134 N5373 Campbell Drive Menomonee Falls, WI 53051 USA Tel: +1 262-781-8850 www.jax.com

MAGNETIC CYLINDERS

Bunting Magnetics 500 S. Spencer Road Newton, KS 67114 USA Tel: 316-284-2020 www.buntingmagnetics.com

T.D. Wright Inc.

292 Walnut Street St. Paul, MN 55102 USA Tel: +1 651-227-1302 www.magneticcylinders.com

MAINTENANCE

Amro Supply Inc 140-11 Keyland Court Bohemia, NY 11716 USA Tel: +1 631-419-1203 www.amro-supply.com

METAL DECORATING EQUIPMENT

Fuji Kikai Kogyo Co, Ltd. 44-2-10 Hachihonmatsuhigashi Higashihiroshima, 739-0146 Japan Tel:+81-82-428-2455 www.fujikikai.co.jp

Koenig & Bauer MetalPrint GmbH

Wernerstr. 119-129 D-70435 Stuttgart, Germany Tel: +49 711-69971-0 www.metalprint.koenig-bauer.com

Crabtree of Gateshead

Trading Estate, Gateshead Tyne & Wear, NE11 OSU UK Tel: +44-191-487-5071 www.crabpress.co.uk

METAL SHEET DETECTORS

Innosen 7691 N. Overland Trail Fort Collins, CO 80524 USA Tel: 1+ 970-305-8721 www.innosen.com Prime Controls

4528 Gateway Circle Dayton, OH 45440 USA Tel: +1 937-435-8659 www.primecontrols.com **OVENS**

Ajax TOCCO Magnethermic

1745 Overland Avenue N.E. Warren, OH 44483 Tel: 330-372-8552 asmetana@ajaxtocco.com **Arc Pacific Limited** 1005 Richards Road, Ste. P Hartland, WI 53029 Tel: 262-367-5096 www.arcpacific.com

International Thermal Systems

4697 West Greenfield Ave Milwaukee, WI 53214 Tel: 414-526-0431 www.internationalthermalsystems.com

OVEN CLEANING

Ace Cleaning Experts 4922 Chase Rd. SE Carrollton, OH 44615 USA Tel:330-283-9464 chuck@acecleaningexperts.com

OVEN PARTS & SERVICES

Environmental Services & Technologies 4941 41st Street Moline, IL 61265 Tel: 309-762-9551 www.envsrv.com

Babcock & Wilcox Megtec Systems

830 Prosper Street De Pere, WI 54115 Tel: 920-337-1505 www.megtec.com

Perm Machine & Tool Co

9660 Industrial Drive St. John, IN 46373 USA Tel: +1 219-365-5000 www.permmachine.com

PREPRESS SERVICES

Anderson Vreeland 15348 Rt 127 N.E.Bryan, OH 43506 USA Tel: 866-282-7697 www.andersonvreeland.com

Carey Color, Inc (Chicago Div.)

1160 Pierson Drive Suite 102 Batavia, IL 60510 Tel: 630-858-6901

Cocks Clark Graphics, Inc

2200 Arapahoe Street Denver, CO 80205 USA Tel: 1-303-919-3920 www.cocksclark.com

Hell Direct Laser Engraving

2185 Highway 292 Inman, SC 29349 864-472-0334 www.helldirectlasers.com

SGS International

626 W. Main Street Suite 500 Louisville, KY 40202 USA Tel: 502-637-5443 www.sgsintl.com Tel: 908-686-5536 ww.sstudios.com

RESOURCE GUIDE

SS Studios 1023 Commerce Avenue Union, NJ 07083 Tel: 908-686-5536 ww.sstudios.com

VN Graphics 14640 NE 91st Street Redmond, WA 98052 USA Tel: 425-454-5165 www.vngraphics.com

Youngstown Pre-Press Inc 3691 LeHarps Road Youngstown, OH 44515 Tel: 330-793-3690 gdobrindt@ameritech.net

PRESS/COATER CYLINDER REPAIR/REPLACEMENT

Beckon Worldwide, see Bodymaker spare parts Brodie System

1539 West Elizabeth Ave Linden, NJ 07036 USA Tel: 908-862-8620 www.brodiesystem.com

QUALITY TESTING & VISUAL INSPECTION EQUIPMENT

Acu-Gage Systems 12 Park Avenue Hudson, NH 03051 Tel: 603-622-2481 www.acu-gage.com

Advanced Color Technologies 200 Capri Court Greenville, SC 29609 USA Tel: 864-370-2990 www.measurecolor.com

Applied Vision Corporation 2020 Vision Lane Akron, OH 44223 USA Tel: +1 330-926-2222 www.appliedvision.com

CMC-KUHNKE, Inc. 1060 Broadway Albany, NY 12204 USA Tel: +1 518-694-3310 www.cmc-kuhnke.com ISRA Vision 4470 Peachtree Lakes Drive Duluth, GA 30096 USA Tel: +1 770-449-7776 www.isravision.com

Intelligence Sensing, Inc 46828 Butternut Road Oberlin, OH 44074 USA Tel: +1 440-774-4411 www.intelsen.com

Pressco Technology, Inc 29200 Aurora Road Cleveland, OH 44139 USA Tel: +1 440-498-2600 www.pressco.com

SACMI 3434 106th Circle Urbandale, IA 50322 Tel: 515-276-2052 www.Sacmi.com

Sencon 6385 W. 74th Street Bedford Park, IL 60638 USA Tel: +1 708-496-3100 www.sencon.com

Sensory Analytics 4413C West Market Street Greensboro, NC 27407 USA Tel: +1 336-315-6090 www.sensoryanalytics.com

REPAIR (SPARE) PARTS

Beckon Worldwide, see Bodymaker Spare Parts

Cleveland Folder Service 4330 Lee Ave, Gurnee, IL 60031 USA Tel: +1 847-782-5850 www.clevelandfolder.com

REBUILDS

Integrated Packaging Solutions 4010 Youngfield Street Wheat Ridge, CO 80033 Tel: 303-426-4881 www.intpacsol.com

2 PIECE DECORATOR MACHINERY

Belvac Production Machinery 237 Graves Mills Road Lynchburg, VA 24502 Tel: +1 434-832-6300 www.belvac.com

Intercan Group Ltd 38 Burners Lane Kiln Farm, Milton Keynes MK11 3HB United Kingdom Tel: +44 (0) 1908 270041 www.intercan.co.uk

Stolle Machinery 6949 South Potomac Street Centennial, CO 80112 Tel: +1 303-708-9044 www.stollemachinery.com

USED EQUIPMENT DEALERS

Perm Machine & Tool see oven parts & services

UV EQUIPMENT

American Ultraviolet Aetek UV 212 S. Mt. Zion Road Lebanon, IN 46052 Tel: 765-483-9514 www.auvco.com

Heraeus Noblelight America 910 Clopper Road Gaithersburg, MD 20878 Tel: +1 301-527-2660 www.heraeus.com.

IST METZ GmbH Lauterstrabe 14-18 D-72622 Nurtingen, Germany www.ist-uv.com

Miltec UV 146 Log Canoe Circle Stevensville, MD 21666 Tel: 410-604-2900 www.miltec.com

WASHERS, WASH COAT SYSTEMS, CAN WASHERS

International Thermal Systems 4697 West Greenfield Avenue Milwaukee, WI 53214 Tel: 414-526-0431 www.internationalthermalsystems.com

PRESTIGOUS

INDUSTRY

AWARD

2020 IMDPA EXCELLENCE IN QUALITY AWARDS

The IMPDA Exellence in Quality Awards recognizes the skillful achievements of the metal decorating and packaging industry.

Entries from around the globe are judged in nine categories with the best entry given the Grand Award:

- Aerosol & Bottles
- Closures & Ends
- Craft Cans
- Digital Printing
- Food & General Line
- · Specialty & Fancy Cans
- 2-Piece Beverage Cans
- Miscellaneous Products
- Canmaking Innovation

SUBMISSIONS DUE BY JUNE 15



EXCELLENCE IN QUALITY AWARDS THE BEST OF THE BEST IN METAL PACKAGING

www.metaldecorators.org/excellence-in-quality