



International METAL DECORATOR

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SAVE THE DATES:



Annual Conference

Wednesday, May 24
& Thursday, May 25, 2017



Annual Scholarship
Golf Outing

Tuesday, May 23, 2017

END OF THE YEAR NOTE

As we reflect on 2016, it can be said that much is the same and much is different. Frankly, that can be said for every year looking back. However, it is how we embrace the constant and adjust to that which is different that determines the level our individual successes. In 2016, our Industry certainly offered and continues to offer those “change” opportunities through the continuing mergers and acquisitions, new technology developments and workplace environmental challenges.

With that in mind, we can once again affirm: It is and has been our goal at the International Metal Decorators Association to provide a neutral environment which provides the opportunity for shared learning experiences and for networking offerings which are held with the spirit of helping our fellow industry members. As we look forward to 2017, we have begun the planning for our May Annual Conference to be held once again at the Hilton Oak Brook Hills Resort in Oakbrook, IL, USA from May 23-25. We are pleased to announce that our Keynote Speaker for the Conference is Dr. Daniel Abramowicz, Chief Technology Officer for Crown Holdings. Dr. Abramowicz will be discussing Innovation and Packaging Technology developments for our industry. Joining the opening presentations will be Debbie Jones of Deutsche Bank who will provide us with their financial perspective on our industry. Both will provide insight into our industry; the one which continues to embrace the constant and adjusts to that

which is different. Our Motivational Speaker, Haydn Shaw, will provide a lively presentation on “Generations in the Workforce,” one of the hottest topics for business content. Please mark your calendar to attend these and other provocative sessions which are held during our Conference. Visit www.metaldecorators.org to stay abreast as the program evolves.

The IMDA is excited to announce the two additions to our Board of Directors for this year. Bob Blandford of Miltec UV and Paul Fennessy of Crown Cork & Seal will be helping us guide the IMDA in future years and we are pleased to have them as part of our leadership team.



We have changed the look of our Newsletter and are beginning to sell ads to support the production. We hope that you are pleased with the improvements made. As always, we appreciate your support and encourage your company to submit articles for inclusion. A schedule of issues can be found on page 3. We wish for all of our members to have a wonderful 2017 with Happiness, Prosperity and Good Health!

2017 IMDA Annual Conference

Hilton
Oak Brook Hills Resort
Oak Brook, IL

May 23- 25, 2017



2016 - 2017 Officers & Directors

President

Art Hurley, Silgan Closures*

Vice President

Dr. William Hoyle, Hoyle Consulting*

Secretary Treasurer

Renee Schouten, INX International Ink Co.*

Executive Director

Michael Masenior*

Directors

Bob Blandford, Miltec UV

John Clark, Heraeus Noblelight America

Rick Clendenning, INX International Ink Co.*

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, Ardagh Group

Janelle Harris, Past President*

Jim Hogan, Rexam Beverage

Kyle Hurla, INX International Ink Co.

Jack Knight, INX International Ink Co.*

James Lore, Watson Standard

Kenneth Matyska, Honorary Member*

Ted Nevins, J.L. Clark

Mark Novotny, Nordson Corp

Neal Santangelo, Urethane Roller Specialists*

Allan Sayers, Sayers Publishing

Phil Shaughnessy, Crown Cork & Seal

Gary Silke, Honorary Member

Steve Steerman, Ball Corp

Mark Von Bokel, SGS International

John Wise, Metal Container

Michael Yavorski, Valspar Corporation*

* Executive Committee Member

DecoDates

March 28-30, 2017

China Can

Shanghai, China

www.chinacanconference.com

April 27-28, 2017

The Beverage Forum

Chicago, IL

beverageforum.com

May 2-6, 2017

Metpack

Messe Essen, Germany

www.metpack.de

May 4-10, 2017

Interpack

Dusseldorf, Germany

Interpack.com

May 23, 2017

IMDA Scholarship Golf Outing

Hilton Oak Brook Hills Resort

Oak Brook, IL USA

Tel: 410-252-5205

E: info@metaldecorators.org

May 24-25, 2017

IMDA Annual Conference

Hilton Oak Brook Hills Resort

Oak Brook, IL USA

Tel: 410 252 5205

E: info@metaldecorators.org

metaldecorators.org

May 15-18, 2018

Cannex

Guangzhou, China

A background image of various soda cans including Sprite, Big Red, Coca-Cola, and others. Overlaid on this is a white box with the text 'Advertise with IMDA' in large bold letters, followed by 'Reach over 1200 industry members'. Below this, it says 'Several Sizes Available' and 'Contact Mike Masenior at info@metaldecorators.org'.

MEMBERSHIP NEWS

New Members

We are pleased to announce that the following metal decorating industry members were approved for membership into the International Metal Decorators Association by the Board of Directors at our October meeting. Congratulations to all; we look forward to having you as members for years to come!

FIRST	LAST	COMPANY	CITY	STATE	COUNTRY
Byron	Barrington	GCPAT	Chicago	IL	USA
Susann	Kutay	Kodak Canada ULC	Burnaby	BC	CANADA
Julie	Speiss	Hell Direct Laser Engraving	Inman	SC	USA
Peter	Stathopoulos	Montebello Packaging	Hawkesbury	ON	CANADA
Dan	Sweetwood	Allied Photo Chemical	Kimball	MI	USA
Tom	Zopf	Montebello Packaging	Hawkesbury	ON	CANADA

IMDA Committees and Chairpersons

The following persons are in the current leadership roles. If you wish to join a committee, please email us at info@metaldecorators.org and let us know what committee you want

Conference Committee: Dr. William Hoyle

Scholarship Golf Outing: Kyle Hurla

Newsletter: Michael Masenior

International Outreach: Jack Knight

Website: Renee Schouten

Social Media: Michael Masenior

Membership: Mark Novotny

Decorator of the Year: Ken Matyska

Excellence in Quality: Michael Masenior

Scholarship: Gene Furey (only open to Past Presidents)

Nominating: Joe Finan (only open to Exec. Committee)

Technical Resource: Steve Steerman

Future Newsletter Publications

Request for Articles

Following are the dates of future publications and featured topics. If you wish to submit copy, please email the files to info@metaldecorators.org by the listed due dates.

First Quarter 2017 (copy due February 24, 2017)

Topics: Substrates

Coatings and Materials

Conference Preliminary Agenda

Second Quarter 2017 (copy due March 30, 2017)

Topics: Pre-Press

Quality and Vision Systems

All issues to include Technology papers. Please submit by the respective due dates.

Mark your calendars, inform your PR staff, marketing departments and others key to providing valuable information for our industry.

2017 Scholarships

We have mailed the notification and forms for applying. However, you may also request the application form by requesting to info@metaldecorators.org. The deadline for submission is March 31, 2017. The awards will be announced at our Conference in May.



INK AND WATER BALANCE

Kenneth Matyska

This article will cover the affect water, fountain solution has on ink. In Lithographic offset printing we are mixing ink, which is an oil base, with water together as part of the process. This is where the skill of a press operator and years of experience comes into play. In theory ink/oil and water do not mix together but our press operators make this phenomenon happen everyday.

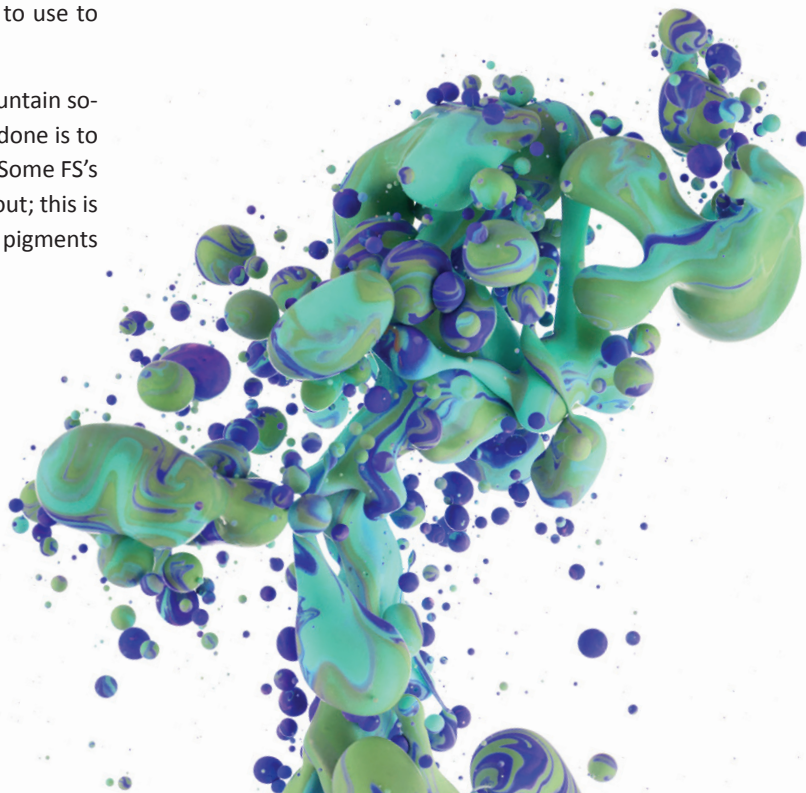
If the press operator does not balance his ink and water level a number of quality issues will develop. Foremost is off color, the ink can become water logged, emulsified, reducing the color strength resulting in color variation. The emulsified ink will not flow down the ink roller train evenly resulting in an uneven ink distribution across the rolls resulting in color variation.

So the first process control that must be put into place starts with water, should tap water or treated water be used as the base of the fountain solution? Tap water changes with the seasons, with chemicals from water treatment facilities to name a few. In all cases treated water is your best and only bet. You can use a deionizer to remove the hardness from the water or a reverse osmosis system that filters the water until it is free of contaminates. RO water is very corrosive so it is advisable to add some salts back into the RO water to achieve a conductivity reading of 50 micromhos. Conductivity is the measurement of a solution's ability to conduct electricity based on its concentration of ions. RO water is the best system to use to control your water.

Now that the water is controlled lets start adding fountain solution, FS, to the water. The first thing that must be done is to determine what effect, if any, the FS has on the ink. Some FS's can attack the ink causing the pigments to separate out; this is noticeable in the FS chiller tanks. If you see a lot of pigments floating around in the tank or if the filter you have in the tank has a lot of pigment in it then work with your FS or ink supplier to determine if the solution is compatible with the ink. Once you are satisfied you have a compatible system then run a conductivity test to determine the conductivity of your FS at different concentrations. The FS supplier will specify the amount of FS concentrate that should be used. It is

important to note that FS is concentrated; a recommended mix could be a minimum of 3 ounces per 5 gallons of water with a maximum of 6 ounces per 5 gallons. Check with your supplier for the correct amount. It is important to start at the minimum level of concentrate to see how it performs while printing. It is not recommended to use the maximum level because in some cases you may need to increase the level of FS and will not be able to because you are at the maximum level. Also note that all FS's are buffered which means adding more than the maximum level will not make a difference.

Now that we have our water and FS mixed up we need to add a wetting agent. Either alcohol or an alcohol substitute are both wetting agents that reduce the surface tension of the non-image area of a printing plate. Alcohol is a solvent, which should be used at a maximum concentration of 5%, anymore will cause the ink to breakdown especially if you run UV inks. If alcohol is used at a high enough level it will affect UV ink cure, it also can has health and environmental concerns so it is not the first choice in most cases you cannot use alcohol because of the environmental impact. Now run a conductivity test to determine the conductivity of your FS and alcohol substitute at different concentrations to determine the conductivity levels. Your FS supplier will recommend the minimum and maximum levels that should be used. Now you have a FS operating range to work with.





RESOURCE GUIDE TO PACKAGING, REGULATORY AND SUSTAINABILITY WEBSITES

Regulatory & Compliance:

Government:

Federal:

FDA	US Food & Drug Administration	www.fda.gov/food
NIOSH	US National Institute of Occupational Safety & Health	www.cdc.gov/NIOSH
NIH	US National Institute of Health	www.nih.gov
Health Canada	Canada Department of Food Safety: Regulations	www.hc-sc.gc.ca/fn-an/securit/index-eng.php
Canada Department of Food Safety: Food Inspection		http://www.inspection.gc.ca/eng/1297964599443/1297965645317

State & Country

OEHHA	California Office of Health Hazard Assessment	www.oehha.ca.gov
Prop 65	California Office of Health Hazard Assessment	www.oehha.org/prop65

Trade Associations

State & Country

NAMPA	North American Metal Packaging Alliance	www.metal-pack.org
CMI	Can Manufacturers Institute	www.cancentral.com
SPI	the Society of Plastics Industry	www.plasticsindustry.org/
PIC	International Print & Paint Council	www.ippic.org/
ACA	American Coatings Association	www.paint.org/
WPCIA	World Paint & Coatings Industry Association	www.wpcia.org/
GMA	Grocery Manufacturers Association	www.gmaonline.org
IFC	Infant Formula Council	www.cga.ct.gov/
Cans: The Sustainable & Smart Solution		www.smartcansolutions.com
The Aluminum Association		www.aluminum.org
American Beverage Association		www.ameribev.org
Steel Recycling Institute		www.recycle-steel.org
Sustainable Packaging Coalition		www.sustainablepackaging.org
American Coatings Association		www.paint.org
World Paint & Coatings Industry Association		www.wpcia.org

This site includes other association websites from around the globe

EMPAC The European Organization for Packaging and the Environment	www.europen-packaging.eu
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This site has members in the metal packaging industry

European Commission	REACH	http://ec.europa.eu/enterprise/sectors/chemicals/reach/index_en.htm
European Commission	Understanding Reach	http://echa.europa.eu/regulations/reach/understanding-reach



WHAT CAUSES SCUM?

Kenneth Matyska

- 1) First questions are: is the scum isolated to one press, multiple presses, or on all presses?
- 2) Second question: does the scum appear at start up? Or does it appear during running?
- 3) Third question: does the scum appear only on certain inks? Which inks? Ink companies perform a test on inks called water pick up. Each pigment will absorb water at different levels and absorption rates. There are known water pick up problems with certain colors all due to the pigment.
- 4) Fourth question: does the scum come and go or is it always in the same spot?
- 5) You will have scum problems if the ink form roll settings to the printing plate are not set correctly. Too much or too little pressure to the plate will cause sum.
- 6) Using too much ink reducer in an ink to adjust the body will cause scum problems. Do not use any!
- 7) If a lot of transparent white ink is used on the press it will cause scum. This ink is clear and is used to weaken the ink or extend it. Transparent white ink also likes water, do not use it. If you use it you will have to increase the ink film thickness (density) to get your color. As you increase the density the water has to be increased. As you increase both ink and water you will start fighting scum problems.
- 8) Ideal water temperature in the dampening system chiller tank is between 50 to 60°F. Warmer temperatures will cause scum, colder will result in poor in ink lay down.
- 9) If the dampening form roll pressure is not set to the plate at the correct setting you will have scum problems. Check the setting between the pan and metering rolls to insure they are set at the right squeeze. Has the dampening system metering roll been skewed throwing off the settings?
- 10) If the dampening system water pan roll is oxidized then it will not carry the water evenly, clean the roll with an approved water pan roll cleaner.
- 11) Be careful during ink roll wash ups to insure you do not get any wash up solvent into the dampening system. Solvent in the dampening system will cause scum. Check the conductivity in the water supply pan. If it is different than what is in the chiller then you probably have solvent in the pan. It takes

a while for the pan to completely recirculate into the chiller.

12) Check the ink rolls after a color wash up for wet spots. Wet spots mean solvent is trapped on the ink rolls and did not dry off. Ink roll settings are off if you see this condition. Its also good to rinse the ink rolls with warm water after a color wash up to get any trapped solvent washed off and/or fountain solution.

13) Check your conductivity, should be at 1100 – 1200 micromhos to start with a maximum of 2000. Readings are dependent on the area where you work. One gallon of plain reverse osmosis treated water should be approximately 40 micromhos. More fountain solution “is not better”. Generally the fountain solution supplier recommends you use 1.5 to 4.0 ounces per 1 gallon of water then that’s what must be used. I can’t begin to tell you how important conductivity is running a press. I recommend you change the fountain solution in the chiller tanks when the conductivity hits 2200 maximum. Don’t fight it.

14) Check the conductivity meter’s calibration before you use it.

15) Reverse osmosis (RO) treated water can cause you a lot of problems especially when maintenance is not pulled on the



treatment unit. I remember way back to a time when a system shut that was not serviced shut a printing plant down. The problem was caused by the RO system, needs to be cleaned and filters must be replaced periodically as per the suppliers recommendations.

16) Too much heat from the UV inter-decks could be increasing the temperature of the printing plate causing the scum problems.

17) Wash up the presses with an ink roll cleaner like FEBO 2000 from Botcher. When you wash up presses continuously like we do a film builds up on the rolls we call glaze. The glaze will cause the ink and water to puddle and not evenly meter



out along the ink and dampening rolls. After you wash up with ink roll cleaner wash down the rolls with warm water.

18) After you print some sheets look for a scum line along the front or gripper edge of the printing plate. No line means too much water, a wide line means not enough water, an even thin line means the ink and water balance is just right.

19) It is very difficult to balance the ink and water on a wide press everything has to be just right. There is a narrow window for ink and water control.

20) A fountain solution pH will be between 4.1 – 4.3 at the suppliers recommended levels of use, depends on the solution you are using. Conductivity is more important than pH. All fountain solutions are buffered which means if you add more than the suppliers recommended amount the pH will not change, more is not better it is worse. As you add more fountain solution the conductivity increases as the conductivity increases so does your solutions ability to keep the printing plate clean.

21) Make sure you have good filters cleaning the fountain solution in the chiller tank. Clogged filters or no filters will increase your conductivity resulting in scum. Do not use any reducers, extra photoinitiator's, transparent white or an ink retarder in the UV ink if you ink is not right contact your ink supplier to adjust it.

22) Alcohol is used in your dampening system it must be Iso-propanol at 99% use no more than 5%. The less you use the better. Alcohol is a solvent, it will reduce the strength of an ink which will cause you to use more ink then more water and cause scum.

23) Do the press operators wash the printing plate with solvent? If yes then it must be washed off with water before starting the press back up. If it is not washed off the solvent will get transferred into the ink rolls. We do not want solvent in the press or on the printing plate.

24) Do not keep wiping aluminum printing plates down with water. Aluminum plates do not like to be wiped down. Excessive wiping will cause the non-image area to become sensitive when it does it will attract ink or scum. Put the plates in the press and run them.

25) Do the press operators speed up the dampening system to clean scum off of the plate? If yes this adds a lot of water in the ink train and you are back to fighting ink and water balance.

26) Audit the plate-making department to insure they are gumming the plate properly.

Butyl Cellosolve Solvent can be used for wash-up of the presses. Make sure that the rollers are completely dried off prior to inking up. If the rollers are still damp with Butyl Cellosolve Solvent it will mix into the ink and you will emulsify the ink causing scumming and ink washout to occur.

Aluminum printing plates are notorious for running dry causing scum to occur. When checking a printing plate for proper amount of water shut the press down and immediately look at the press plate you should see the water begin to evaporate off of it. Also jog the press around and inspect the printing plate for traces of scum in particular at the lead edge.

We do not check pH we check Conductivity; fresh solution normally falls in at 800 and if the water is kept cleaned it will average right around 1100 to 1200. Do not let the water exceed 2000. If the conductivity hits 2200 micromhos shut the press off and change the solution.

Calibration of the conductivity gauge is very important because if the gauge is not calibrated regularly, this can cause real problems also.

Use of Febo 2000 on the rollers regularly during wash-up is also recommended; this material conditions the rollers and

CONTINUED ON PAGE 12

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IMDA BOARD OF DIRECTORS MEETING

October 6, 2016 / Hilton Oakbrook Hills

Attendance

Art Hurley	Gary Silke	Ken Matyska	Mike Masenior
Bill Hoyle	Gene Furey	Kyle Hurla	Nick Hammer
Bill Graue	Joe Finan	Mark Novotny	Paul Fennessy
Craig Eberts	John Clark	Mark VonBokel	Renee Schouten

1. Invocation Craig Eberts
2. Convene Meeting Art Hurley
3. Welcome new BOD member Art Hurley
4. Memorials Craig Eberts
5. Minutes of May 2016 Renee Schouten
6. Treasurer's Report Renee Schouten
 - a. Money market account to be combined by end of year (M2A Bill, 2nd Joe)
7. Secretary's Report Renee Schouten
 - a. One note from Somasundram TV S L Subramanian (M2A Art, 2nd Bill)
8. Committee Reports
 - a. Conference Bill Hoyle
 - i. Gave summary of discussion we had with the Hilton post show in June. Noted we have more space for table-tops in 2017 as we have the amphitheater as well. Keynote speaker and financial speakers are lined up. Dan Abramowich from Crown, and Debbie Jones from Deutsche Bank are in! (M2A Renee, 2nd Art)
 - b. Golf Kyle Hurla
 - i. 216 paid golfers, 180 showed up. A little crowd in tent should consider different layout next year. Gifts were quicker and people appreciated that. Next year golf is \$80 vs. \$75. **Should look at increasing cost to golfers.** (M2A MV, 2nd Bill)
 - c. Scholarship Gene Furey
 - i. Kenny presented – 12th year for program. 211 total applicants, 82 scholarships awarded = 40% chance of winning, \$73,000 awarded to date. 15 applicants, 7 awarded in 2016 (M2A AH, 2nd JF)
 - d. Newsletter Mike Masenior
 - i. 3rd qtr color version is on the website. Mike presented budget for printing in color and selling ad space. Renee offered to redesign newsletter. Mike solicited content from BOD companies. **Paul F will ask Jan to provide article on Craft Brewers.** Nick Hammer asked about just doing an electronic letter. Mike noted we send out email blasts to 1500 emails. Click rate is low and so is visitor traffic to newsletter and members section on the website. Board agreed we need to do both, print and electronic and to produce newsletter in 4C with advertising spaces. Craig requested open up the members area (**Renee to redesign for 4th qtr and make change on site**). BOD agreed to take the newsletter out but leave the rest password protected. (M2A AH, BH)
 - e. Quality Contest Mike Masenior/Neal Santangelo
 - i. Celebrated 20th year. 150 entries including new players. Overall quality was par with past entries. Solicited for volunteers to help reclassify categories. Maintaining high level of sponsorship. Recommended to give each winner 2 awards, one for the decorator, one for the customer. BOD agreed to give one and option to purchase more. **Mike to make this happen in 2017.** (M2A MV, 2nd JF)
 - f. Decorator of the Year Mike Masenior
 - i. Contest growing, stay the course. (M2A BH, 2nd MV)
 - g. International Outreach Jack Knight



i. Jack not present. Mike recommended sponsoring a seminar in International events like Cannex and Latin-Can. Topics and speakers generated by the IMDA. Ask AV company to segment the videos so that we can post only those that are approved and provide them within 24 hrs. Once website is updated we will run an ad with sponsoring publications to promote the videos are up. Jack Knight to contact MetPack then determine who to attend. (M2A KM, 2nd RS)

h. Technical Resource

Steve Steerman

i. Steve Steerman not present. Mike noted we established a committee and they are soliciting article for newsletter and website. Paul Zienhart provided an article that was posted in technical resources article. Mike is going to review articles and provide pdfs for posting. Working on glossary. (M2A BH, 2nd JF)

i. Website

Renee Schouten/Mark VonBokel

i. Renee to add "not a member, apply here" to Members page. (M2A KM, 2nd JF)

j. Nominating

Joe Finan

i. Now doing electronic voting. Bob Blandford of Miltec voted on and accepted as board member. (M2A JF, 2nd BH). Discussed if the 3 members we approach do not accept officer role, Mike Masenior will be Treasurer and Secretary for 2018.

k. Membership

Mark Novotny/Mick Masenior

i. Mark reviewed statistics provided by Mike Masenior. Voted on 6 new members – accepted. Nick Hammer asked if we can streamline this voting process as well. (M2A MN, 2nd BH). Renee to post new form once updated with submission instructions.

9. Other Business

a. 2018 Conference Site – Selection committee visited other sites which were more expensive and offered nothing that would encourage us to move. Exec Team agreed to stay at Hilton Oakbrook 18-19 after negotiating terms and presented terms to the board and agree to move forward with agreement. (M2A BH, 2nd KM)

b. Exec Team suggested each committee chair provide Art a monthly committee paragraph. (M2A JF, 2nd RS)

**INNOVATION
& TECHNOLOGY**

≡

PROGRAM FORMAT

TUESDAY, MAY 23
IMDA Memorial Scholarship Golf Outing

WEDNESDAY, MAY 24
General & Technical Sessions and Awards Luncheon

THURSDAY, MAY 25
General Session and Luncheon

REGISTER TODAY

WWW.METALDECORATORS.COM



GRAPHICALLY SPEAKING...

Kenneth Matyska

We have been in the printing /graphic arts business for years, we have our own language that we use everyday. I would like to explore some commonly and not so commonly used printing and graphic arts terms:

Back trap mottle - blotches and streaks in the solids and tones of an overprinted ink film on a press sheet due to the transfer of a printed ink film from the substrate to the blanket of a subsequent printing unit.

Chroma – is the intensity or strength of a color, its saturation or degree of departure from black and white.

Conductivity - the measurement of a solution's ability to conduct electricity, based on its concentration of ions. The measurement is expressed in micromhos. An ion is an atom or a group of atoms.

Contrast - the tonal gradation between the highlights, middle tones and shadows in an original or reproduction.

•Delta E - less than 1

Perception - no difference

Interpretation - excellent match

• 1-2

Perception - just noticeable

Interpretation - Good match

• 4-6

Perception - Noticeable

Interpretation - Fair match (subject dependent)

•Delta E - 8 or higher

Perception - strong difference

Interpretation - poor match

FTP file transfer protocol - the tool used to retrieve information in the form of electronic files from any number of computer systems linked via the TCP/IP protocol. Users in effect transfer copies of information found on remote computers either directly to their own computers or to a service provider's network and then to their own computer.

GCR gray component replacement – an electronic color scan-

ning capability in which the least dominant process color is replaced with an appropriate value of black in areas where yellow, magenta, and cyan can overprint. Color variation on press is less serious when GCR is used.

Halftone - a printed reproduction of a continuous-tone image composed of dots that varies in frequency (number per square inch), size, or density, thereby producing tonal gradations.

Ink color strength - the ability of ink to give a color value to the substrate; the pigment-to-vehicle ratio.

Ink tack - the sticky or adhesive quality of ink, which is measured by determining the force required to split an ink film between two surfaces.

Lightfastness - the ability of a printed surface to resist deterioration (fading and yellowing, etc.) caused by sunlight or artificial light.

LPI Lines per inch - designates the resolution of a halftone screen. Screens with a higher number, such as 120 or 133 have a higher resolution than screens with lower numbers such as 65 lines per inch. Alternative term: screen ruling.

Masstone - the color of ink in bulk, such as in a can, or of a thick ink film. It is the color of light reflected by the pigment and often differs from the printed color of the ink.

Metamerism - is the phenomenon that occurs when a proof or press sheet matches the original under one light source but not another. The heat of the light source could cause the colors look different. The blended ink pigments reflect and ab-





sorb different wavelengths of light, causing the colors to look different.

Nanometer - a unit of measuring wavelengths of electromagnetic radiation, visible light wavelengths range from 400-700 nanometers.

pdf - Portable Document File, a computer file format that preserves a printed or electronic document's original layout, type fonts, and graphics as one unit for electronic transfer and viewing. Done in a common language not with specialized software. Commonly used in our everyday lives in all communication types.

Postscript - a trade name for a page description language that enables imagesetters /platesetters developed by different companies to interpret electronic files from any number of personal computers and off-the-shelf software programs.

Print contrast - is the result of a calculation comparing the density readings of a three-quarter-tone value area (75%) to the density of a solid area (100%) of the same process color. Good print contrast indicates a printing system's ability to hold open the shadow areas while still maintaining high solid ink density.

RGB red, green, blue - human vision allows us to see light in a visible spectrum that ranges between 400 and 700 nanometers. The spectral region we see as blue spans approximately the range 400 to 500 nm, while 450 to 640 nm is green, and 500 to 700 is red.

RIP Raster Image Processor - the device that interprets all of the page layout information for the marking engine of the imagesetter, PostScript, or another page description language.

Screen angle - the position of the rows of dots on halftone screens in relation to a reference grid with horizontal and vertical lines. The most dominant color screened is positioned at a 45-degree angle to the reference grid.

Scum line - is a good example of ink/water balance that forms on the plate bend on the lead-edge of the printing plate. Perfect ink/water balance yields a thin even scum line across the width of the plate. If the plate is too dry in an area the scum line increases in width; if it is too wet the scum line disappears.

Vector graphics - are also known as object-based graphics (since they are built up from individual objects). The objects created remain separate entities and can be edited at any point until they are rasterized for output.

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WEBSITE REPORT

The IMDA website continues to evolve as we get more participation from industry members on our committees. The Technical Resource committee lead by Steve Steerman of Ball has begun to populate the Technical Resources section of your website located here: http://www.metaldecorators.org/technical_resources.php. Now included are technical articles including, "Plates and Processes", "Film Weight Variations" and "About Coil Coating". Up next is a Glossary of Terms so be on the lookout for that. Please remember as a member of the IMDA you are granted permissions to view valuable information only available to our members. Information that helps to foster and encourage improvements and advances in the art of metal decorating through education and communications. In our members only section you will find this information:



Directories
Presentations
Videos
Photos
Archives
Survey Results

Latest version of listings with IMDA members and resources
Slides from the presentations at the 2016 annual conference
Recordings from the presentations at the 2016 annual conference
Images from the 2016 annual conference event
History of conference information from past years
Breakdown of 2016 annual conference results

WHAT CAUSES SCUM?

CONTINUED FROM PAGE 7

pulls out all the solvent, chemicals that build up on the surface of the rolls, Febo 2000 keeps them soft and receptive to ink for better transfer of ink.

You should inspect all of your ink rollers in particular your form rollers for pitting and shredding in particular at the ends of the rolls.

Get in the practice, at least once per month, of washing the press down with warm water the warm water dissolves the buildup of gum arabic that can build on ink rollers.

Check you water pan roller; which is chrome plated; use a metering roller cleaner. This cleaner etches the roller; after etching the roller; apply a coat of gum arabic. This should be performed during the weekend shut down of the press. This will reduce oxidation on the water pan roll.

All too often we find scum being caused by over applying ink and countering it by adding more water. If you find a color is running light; instead of applying more ink cut down on your water. You will be very surprised, in most cases, how much you can bring the water down and surprisingly how much sharper the print becomes.

A golden rule to follow; formulate the ink as strong as possible; this allows you not to have to over apply the ink and allows you to carry a minimum amount of water which gets you your sharpest printing.

Always run your inks straight; no reducer, no drier, no transparent white ink all of these materials cause scum.

Running loads of "hot tinplate" through a press will cause scum because of the heat transfer to the blanket and printing plate cylinders. What I mean by "hot tinplate" is if it is coated then sent directly to the press for printing. If the sheets are too hot the heat will warm up the blanket and printing plate cylinders drying up the fountain solution on the printing plate causing scum.

When you are developing printing plates check the non-image areas of the plate with high-powered magnification. Is it clean or can you see tiny specs of photopolymer? You can also check the plate after they have been used in the press, these tiny specs maybe easier to see with ink on them. The tiny specs will print in the non-image area of the sheet you are printing. You can see the specs in the non-image area with a loupe. We found the processor used in the prepress department had dirty processing solution, the filter system in the processor was clogged and not filtering out these tiny specs of photopolymer.



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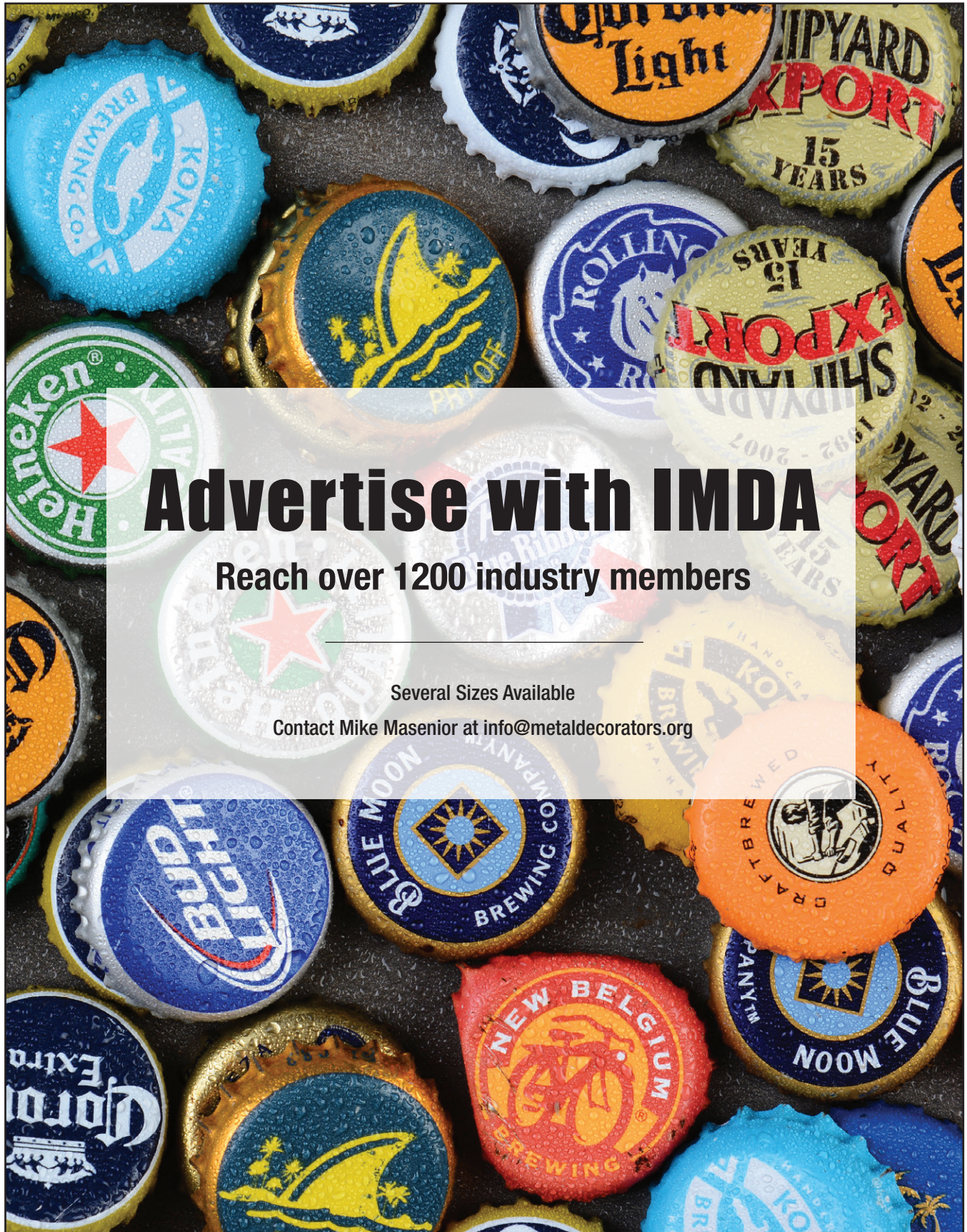
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