

## Recent appointments...

On May 1, 2004, DSM Desotech was pleased to announce the promotion of Weber Lin to the position of Sales Director-Asia. He succeeds Myron Bezdicek, who has been appointed Project Director for Desotech's newest manufacturing facility, DSM Desotech Specialty Chemicals (Shanghai), Ltd.



Weber Lin

Weber Lin joined DSM Desotech in January 2002 as Sr. Account Manager-Asia, where he was responsible for our China distributors and Asian customers outside of China. Prior to joining Desotech, Mr. Lin worked for DSM Coating Resins in their Taiwan sales office.



Myron Bezdicek

Mr. Bezdicek joined DSM Desotech in 1977. Since that time, he has held several research and sales positions. He was appointed Sales Director-Asia in 2000.

### Optical Fiber & Cable News

**Kim Axiotis**  
Editor

Quarter 3, 2004

DSM Desotech Optical Fiber & Cable News is published as an information resource for the optical fiber industry. Reader inquiries and suggestions for content are welcomed and should be directed to the editor at:

DSM Desotech  
1122 St. Charles Street  
Elgin, Illinois 60120 USA  
Phone: 847/697-0400  
Fax: 847/468-7785  
Website: [www.dsmdesotech.com](http://www.dsmdesotech.com)

Optical Fiber & Cable News is a publication of DSM Desotech. The information contained in this publication is offered in the good faith belief that it is accurate, complete and based on reliable data. However, Desotech is not engaged in the business of providing technical or other advice and therefore: (i) such information is provided AS IS and without warranties, expressed or implied, as to its accuracy, completeness or suitability for any purpose; (ii) it is the responsibility of the reader to verify such information before relying on it; (iii) Desotech expressly disclaims any liability for errors or omissions in such information, or the use of, reliance upon, or interpretation of such information by others; (iv) nothing contained in this publication should be construed as expanding the terms or conditions of any Desotech product warranty.

©2004 by DSM Desotech. All rights reserved.



### IN THIS ISSUE

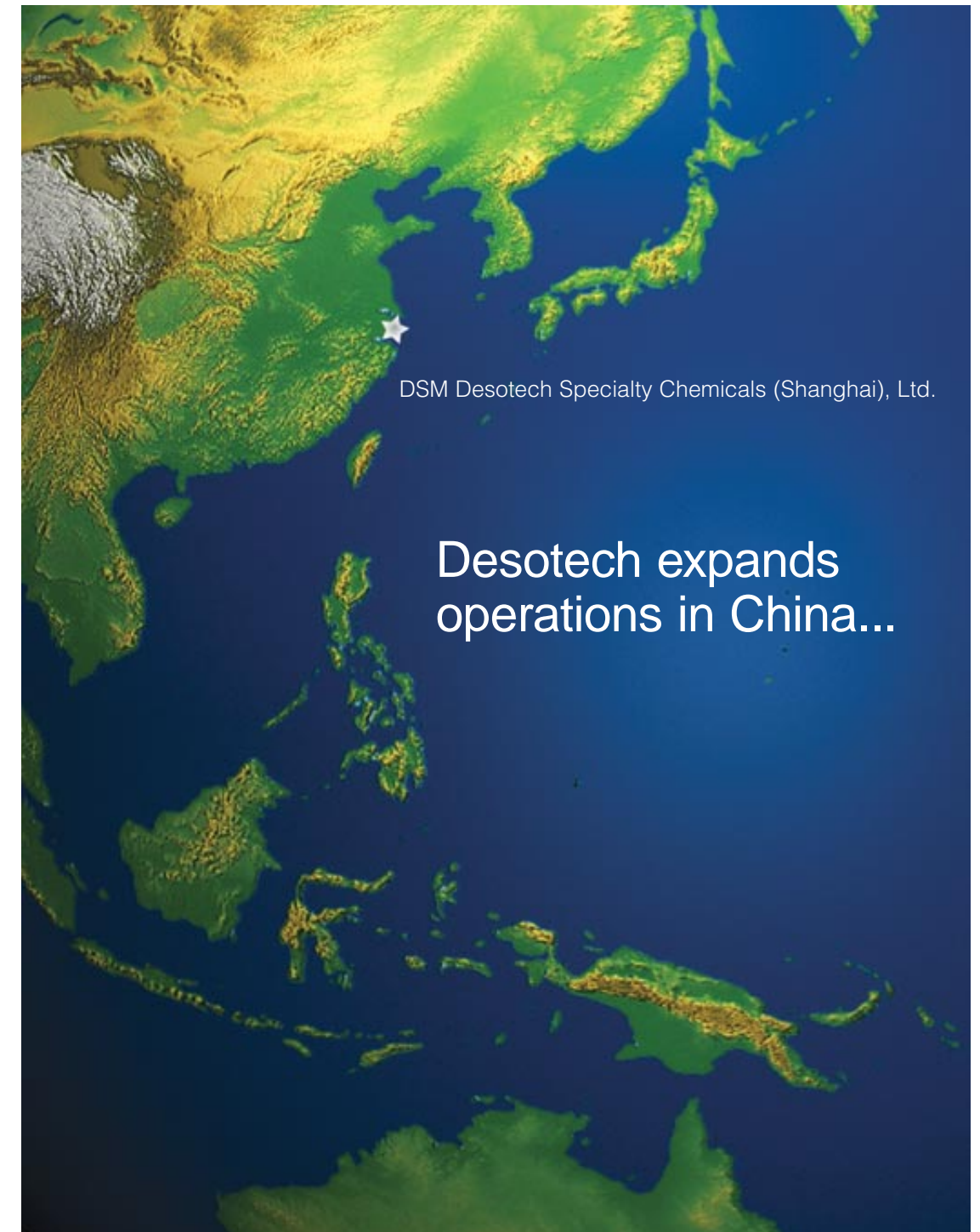
Quarter 3, 2004

Desotech to Open  
Manufacturing Facility  
in Shanghai  
Page 1

Optimizing Production Costs  
with Cablelite® 751 Inks  
Page 3

Appointments  
Page 4

# Optical Fiber & Cable News



DSM Desotech Specialty Chemicals (Shanghai), Ltd.

## Desotech expands operations in China...



*“The Chinese optical fiber industry continues to be quite strong as compared to the rest of the world... A Desotech manufacturing facility in Shanghai will enable us to quickly meet the increase in Asian demand while maintaining the high quality standards the industry has come to expect from DSM Desotech optical fiber materials.”*

— Weber Lin, Desotech Sales Director-Asia

## Expanding DSM Desotech’s Operations in China: Shanghai plant to open by year-end

In keeping with our commitment to the Asian optical fiber and cable industry, DSM Desotech is pleased to announce the establishment of a Cablelite® manufacturing facility in Shanghai, China.

DSM Desotech Specialty Chemicals (Shanghai) Ltd., which is scheduled to open later this year, will be Desotech’s fourth global manufacturing facility—joining plants in: Hoek van Holland, the Netherlands; Stanley, NC, USA; and Tsukuba, Japan.

“The Chinese optical fiber industry continues to be quite strong as compared to the rest of the world,” says DSM Desotech Sales Director-Asia Weber Lin. “A Desotech manufacturing facility in Shanghai will enable

us to quickly meet the increase in Asian demand while maintaining the high quality that the industry has come to expect from DSM Desotech optical fiber materials.”

In 1984, DSM Desotech was the first to supply optical fiber coatings to China producers. Then, in 1999, a Desotech sales office was opened in Shanghai, followed by the opening of both a technical service center and a distribution center in 2003.

Says Marketing Manager Dave Chase, “The Shanghai manufacturing facility is really just the next logical step in Desotech’s longtime commitment to this region.”

### DeSolite® DP-1004 to be stocked in Shanghai

Response from China fiber producers to Desotech’s newest optical fiber primary coating, DeSolite DP-1004, has been extremely positive and many are rapidly converting to the new material for both its processing and performance advantages.

To better support our China customers wishing to use DP-1004, DSM Desotech will begin stocking it locally at our Shanghai distribution center this August.

DP-1004 is the first DeSolite coating to be stocked locally at the Shanghai distribution center. Cablelite® ink and matrix materials have been supplied from there since 2003.

## More on Desotech in China...

### New patents granted

DSM Desotech is growing its patent portfolio in China. Four China patents have been granted to date, and one—issued in February of this year—is particularly important.

“Our latest patent contains strippability property claims that will be key in maintaining Desotech’s strong IP position in the China marketplace,” says Marketing Manager Kevin Weeks.

As Desotech continues to invest in its patent portfolio in China, as well as to actively protect its patented technology throughout Asia and the rest of the world, you can be sure that your DeSolite®, Cablelite® and Bufferlite™ fiber optic materials reflect the very best in innovation, performance and quality.

# Optimizing Production Costs with Cablelite® 751

For most applications, optical fiber is coated with a thin layer of color for fiber identification and ease of handling. Selecting an ink with excellent material properties is critical, as this layer impacts both the transmission characteristics of the fiber as well as the performance of finished cables. But did you also know that ink quality can also play a big part in reducing your production costs?

One important attribute of today’s advanced ink systems is high color density, which makes it possible to reduce ink thickness on the fiber without sacrificing color quality or vibrancy. For cables designed with a higher fiber count, this can add up to a significant savings in material cost.

The current industry standard for optical fiber ink is Cablelite® 751. Given the high color density of these inks, some customers have been able to successfully reduce ink thicknesses by 30% or more by making only slight adjustments in their inking process conditions.

### Reducing Color Layer Thickness

When bare fiber plunges into a viscous fluid of ink, a meniscus is created. The ink is then coated onto the fiber as a function of pressure and viscosity. During this process, color layer thickness is primarily dependent on the diameter of the exit coloring die. The diameter of inked fiber will increase as the diameter of the exit die increases (Eq 1).

In addition to the diameter of the exit die, other parameters such as inking speed, die temperature (viscosity of inks) and application pressure also have some impact on the resulting diameter of inked fiber. Theoretically, when ink is applied by a closed pressurized die, colored layer thickness decreases as line speed increases,

**Equation 1.** The relationship between the diameter of inked fiber and the exit die of coloring can be expressed as:

$$R_c^2 = - (R_1^2 - R_2^2) / (2[R_1^2 - R_2^2 - 2R_1^2 \ln(R_1/R_2)])$$

$R_c$  = diameter of inked fiber (before curing),  
 $R_1$  = diameter of bare fiber, and  
 $R_2$  = diameter of exit die of coloring.

application pressure decreases, and die temperature decreases or viscosity increases.

In order to successfully achieve lower material costs through reduced ink thickness, experimenting with all four parameters—exit die diameter, line speed, pressure and die temperature will be necessary (Table 1).

**Table 1.** Experiment results on reducing ink thickness of Cablelite® 751-020, as reported by one DSM Desotech customer. In this instance, a cost savings of 18% in coloring materials was achieved with only a slight change in process conditions.

No.	1	2
Inking Speed (m/min.)	2000	1500
Pressure Bar	2.0	2.5
Exit die (µm)	256	260
Die temperature (°C)	30	35
Ink/Optical Fiber (g/km)	4.5	5.5

For more information on how to optimize your production costs without compromising the performance or specifications of Cablelite® 751 Inks, consult with your DSM Desotech representative today.