

Recent Appointments

Mr. Henk-Jan Koenen: Business Unit Director (President). Mr. Koenen has succeeded Mr. Steve Hartig as Business Unit Director as of March 1. Since joining DSM in 1987, he most recently held the position of Business Unit Director of DSM Copolymer/ SBR in Baton Rouge, Louisiana.



Mr. Steve Schmid: R&D Manager, Fiber Optic Materials. Mr. Schmid joined DSM Desotech in 1981 and has since held several positions with the company including: Technical Team Leader Fiber Optic Materials, Market Development Manager, Applied Research R&D Manager and Business Unit Quality Assurance Manager.



Mr. Michael Shen: Account Manager, China. Mr. Shen joined DSM Desotech's Shanghai sales team in December 2005 and currently services coating customers throughout China. He previously held the position of Sales Engineer at 3M China Ltd.



Mr. Zong Min: Technical Service Engineer, China. Mr. Zong joins Desotech's Shanghai team this month and will soon begin visiting customers in the region to provide technical support. Prior to joining Desotech, Mr. Zong worked as an R&D Engineer for Nippon Paint (China) Ltd.



Optical Fiber & Cable News

Kim Axiotis *April, 2006*
Editor

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Desotech's Stanley Site Wins Global Safety Award

DSM Desotech's production plant in Stanley, North Carolina, has been named winner of the 2005 DSM SHE Award for top performance in the area of Safety, Health and the Environment from among more than 200 DSM sites worldwide.

The SHE award annually recognizes best performance practices related to the personal safety and health of associates, environmental responsibility, and community reputation. Desotech has been nominated for the award for the past eight consecutive years, with the Elgin site winning in 1998 and the Stanley site named runner-up in 2003.

In addition to the global DSM award, DSM Desotech was recognized in 2004 by *Occupational Hazards* magazine as one of America's 16 Safest Companies and, in 2006, the Stanley plant will receive the North Carolina Department of Labor Safety Award for the ninth consecutive year.



DSM Desotech's two U.S. locations have logged more than 25 combined years without a lost time accident. Above, the production plant in Stanley, NC.

Optical Fiber & Cable News

Strong Start for Fiber in 2006

Optical fiber and cable production increased significantly in 2005 in all major markets except South Korea—and it's clear that momentum has carried over into 2006. With Fiber to the Home (FTTH) initiatives in the U.S. and Japan driving growth, the encouraging news is still tempered by chronic global production overcapacity and associated pricing pressure.

At the recent OFC/NFOEC 2006 conference held in Anaheim, CA, the mood was decidedly optimistic. Global spending on optical networks jumped 17% in 2005 as compared to 12% in 2003 and -20% in 2002, with industry gurus projecting 9-10% continued growth for the foreseeable future. Though spending is increasing globally, China, Japan and America accounted for more than 80% of the fiber produced—an increase of 6% over their 2004 total.

China

In spite of higher than expected demand in 2005 and anti-dumping protection, China continues to struggle with excess production capacity for fiber and cable. Aside from the closure of a relatively new and small fiber maker (Tianda Tiancai in Tianjin), the industry has resisted consolidation. To complicate matters, telecom mergers and centralized purchasing are expected to degrade already rock-bottom fiber and cable prices. As a

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Strong Start

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result, China fiber producers are expected to reach out for global business in an effort to enjoy better prices and payment practices.

Japan

In Japan, the ongoing FTTH program continues to drive optimism. With close to five million subscribers by the end of 2005 (approximately 2.1 million of them coming on-line that year),

Japan's projections are for 30 million subscribers by 2010. By comparison, the U.S. had just roughly 400,000 subscribers in 2005.

Europe

Europe's most recent FTTH conference in Vienna was a notable success, with more than 800 delegates in attendance (as compared to 500 in 2005 and only about 50 in 2004). Interest in FTTH continues to grow, though large scale telecom investments have yet to appear on the horizon as excessive EU bureaucracy and local regulations continue to hinder telecom capital investment.

Some European municipalities are tired of waiting and have decided to take matters into their own hands. Amsterdam, Reykjavik and Vienna, for example, are planning—or already installing—their own FTTH networks. They share one common objective: short term to improve services, and longer term to stimulate economic development.

F(inally) FTH for US

One of the bright spots of 2005/2006 is the U.S. fiber market: the result of long awaited FTTH and FTTC initiatives by Verizon

and AT&T. Both telecom giants are installing networks ahead of need in order to better position themselves against cable and satellite television providers. While employing slightly different strategies, optical fiber cable is critical for both.

Verizon is bringing fiber up to the home, while AT&T is deploying a more inexpensive option of bringing fiber to the neighborhood. According to KMI, AT&T added 1.1 million fiber kilometers in 2005 and Verizon installed 7.8 million. This is in addition to an installed base of 17 and 18 million fiber kilometers for AT&T and Verizon, respectively. Their objective is to provide a network that will carry as much as 100 megabits of data per second, which would allow a movie to be downloaded in less than a minute.

The optical cable business in America is expected to be strong for the next three years, with HDTV expected to be the biggest driver of bandwidth demand for the next five. Additional drivers include triple play, mobility, IP convergence and continued Internet growth. IP Multimedia Subsystems (IMS) will allow video sharing during a phone call, interactive gaming, identification of callers via the television, remote control of household appliances and equipment, etc.

Processing Bufferlite™ with Simple Modifications to Your UV Coloring Equipment

Did you know that your standard UV coloring equipment can be easily modified to produce upjacketed fiber with Bufferlite tight buffer materials? The only required modification is a different coating die to achieve the desired outer fiber diameter. Increased production capacity can also be achieved by utilizing a higher capacity pressure vessel and a larger diameter feed line. Here's what you need to know...

Processing Bufferlite with Only a Die Change:

Process in normal coloring mode, observing the following conditions:

- For 500µm fiber, use a 260-275µm inlet die and a 600-700µm exit die.
- For 900µm fiber, use a 260-275µm inlet die and a 1100-1300µm exit die.
- Ideal processing pressure ranges from 2 to 4 bars.
- Materials may need to be heated prior to application for higher processing speeds.
- Processing speeds vary depending on the number of lamps used, feed line diameter and color. Maximum processing speeds with two Fusion D F10 lamps are:

- 600m/min for 500µm fiber
- up to 300 m/min for 900µm fiber

Maximizing Tight Buffering Productivity

For maximum productivity, consider adding a higher capacity pressure

vessel and a larger diameter feed line (this equipment is already pre-installed on some UV coloring line models) and note the following:

- Pressure vessel: 15L or larger
- Feed line: 9mm inner diameter (vs. 4 mm for standard setup)
- To achieve higher processing speeds, heat both the pressure vessel and feeding line to 50+°C.
- A die set (three individual dies) allows for improved concentricity control. The two component die described in the previous section may also be used.
- Ideal processing pressure ranges from 3 to 5 bars.

For 500µm fiber:

- Recommended dies are: 270µm entrance, 260µm middle, and 620-700µm exit.

- Maximum processing speed with two Fusion D F10 lamps:

- 750m/min for Bufferlite 3038 series
- 1,000m/min for Bufferlite 2000 series

For 900µm fiber:

- Recommended dies are: 270µm entrance, 260µm middle, and 1100-1300µm exit.
- Processing speeds vary depending on the number of lamps used, line conditions and color. Maximum processing speed with two Fusion D F10 lamps is 600 m/min.



News Bites...

Important Anniversary...!

2006 marks the 40th anniversary of the landmark paper entitled, "Dielectric-fiber Surface Waveguides for Optical Frequencies" by Charles Kao and George Hockham of Standard Telecommunications Laboratories in England. Their paper revolutionized the telecommunication industry by demonstrating the potential for glass optical fibers as a replacement for copper.

Use of Bufferlite™ Expanding

Did you know that the use of Bufferlite UV-curable tight buffer and blown fiber materials is expanding? Currently, Asian and European cablers lead the way for this exciting application. For more information on Desotech's complete line of Bufferlite products (including new materials), contact your local Desotech sales representative today.

DDSC Earns Good Reviews

DSM Desotech Specialty Chemicals (Shanghai) Ltd.—otherwise known as DDSC—celebrated a very successful one year anniversary in January. DDSC customers now enjoy purchasing in local currency, improved customer service, and shorter lead times. The plant strengthens Desotech's already leading position in this important market and is one of four facilities currently supplying Desotech and JFC customers worldwide.