

# INDUSTRY WEEK

# IW

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Operational excellence is on  
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2007 Best Plants.

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# MODELS OF SUCCESS

*INDUSTRYWEEK's 2007 Best Plants deliver many routes to operational excellence.*

> BY JILL JUSKO

**T**he INDUSTRYWEEK Best Plants program is an annual celebration of world-class manufacturing and continuous improvement practices within North American companies. All well and good, but when it comes to determining which 10 factories are truly the “best plants,” perhaps the most important distinction is their effectiveness.

Just how effective, for instance, are the employees at Cargill Corn Milling-Team Wahpeton? Effective enough that the larger Cargill business unit has pulled many personnel from the North Dakota manufacturing plant and placed them elsewhere to share their expertise among other Cargill locations. Indeed, since 1997 more than 60 workers from Team Wahpeton have been promoted to locations outside of Wahpeton. And in the past year, more than a third of Team Wahpeton employees have spent significant time at other Cargill operations to help with projects, troubleshoot and provide expertise.

At General Cable-Indianapolis Compounds, multifunctional employees are vital to keeping this plant running effectively and efficiently. Indeed, 100% of the hourly production associates with more than a year's experience are cross-trained in all three of the facility's production job classifications. The plant, which produces polymeric compounds, also benefits from a strong corporate manufacturing excellence program that spreads best practices across the entire General Cable enterprise.

DST Output of California LLC, in El Dorado Hills, Calif., writes in its 2007 IW Best Plants application: “Each step of the production process receives constant scrutiny to combine the latest technology and employee bright ideas to improve speed and quality.” This facility, which produces first-class mail products such as statements and invoices for clients, is a two-time IW Best Plants winner. Its earlier honor occurred in 2002.

And at Lockheed Martin Missiles and Fire Control in Orlando—one of two Lockheed Martin plants whose stories are told

in the following pages—and Autoliv North America-Tremonton Initiator Facility, and others, kaizen events help drive improvements throughout the facilities.

These six plants, as well as the other four that comprise INDUSTRYWEEK's 10 Best Plants in 2007, are engaging their employees, deploying new technologies and collaborating with their supply chain partners as they pursue efforts to be the best. They're deploying a wide variety of technologies, while manufacturing a very diverse group of products. And by no stretch of the imagination are their improvement methodologies all patterned on identical models.

So other than their effectiveness, are there other common traits that describe all the IW Best Plants? Yes—all of them are aligned in an unending pursuit of excellence and an understanding that such a state has not been reached. They're aligned in recognizing that they can't be leaders in their industries without their employees' support. And they're aligned in a mission of successfully tackling the challenges of being a 21st century North American manufacturer.

The metrics tell the tale: Customers of Lockheed Martin's Orlando facility benefit from the plant's on-time delivery rate of 100%. First-pass yield at Cargill's Team Wahpeton is 98.2%. Among the 10 IW Best Plants winners, scrap and rework costs are a median .5% of sales and standard order to shipment leadtime is down a median 41% in the past five years.

Also worth repeating is the mantra of many an IW Best Plants winner, both former and current: Be on the lookout for good ideas everywhere. In these following pages, you can be certain to find many good ideas in your own continuous improvement efforts.

As a final note, the 2007 IW Best Plants stories aren't confined to these magazine pages alone. The online versions contain additional Web-exclusive best practices—and even a short video. Go online to [www.industryweek.com/Best\\_Plants](http://www.industryweek.com/Best_Plants).



## LIST OF 2007 WINNERS:

**Autoliv North America-Tremonton Initiator Facility**  
Tremonton, Utah

**Batesville Casket Co.-Vicksburg Operations**  
Vicksburg, Miss.

**Blue Bird North Georgia**  
Lafayette, Ga.

**Cargill Corn Milling-Team Wahpeton**  
Wahpeton, N.D.

**DST Output of California LLC**  
El Dorado Hills, Calif.

**General Cable-Indianapolis Compounds**  
Indianapolis, Ind.

**Lockheed Martin Missiles and Fire Control at Ocala**  
Ocala, Fla.

**Lockheed Martin Missiles and Fire Control in Orlando**  
Orlando, Fla.

**Medrad Inc., Heilman Center Plant**  
Indianola, Pa.

**Rieter Automotive Canadian Carpet**  
London, Ontario, Canada



# CONTINUING A WINNING CULTURE

*General Cable's achievements derive from a workplace culture bent on maximizing Six Sigma and lean.*

> BY JOHN TERESKO

## AT A GLANCE

General Cable-Indianapolis Compounds Indianapolis, Ind.

**EMPLOYEES:** 58, union (International Brotherhood of Electrical Workers)

**TOTAL SQUARE FOOTAGE:** 50,000

**PRIMARY PRODUCT/MARKET:** polymer compounds

**START-UP DATE:** 1987

**ACHIEVEMENTS:** INDUSTRYWEEK Best Plants Finalist in 2006; selected as General Cable's 'Best Plant In North America' over 18 other facilities; President's Award for Lowest Incident Rate—no accidents or incidents of any kind over a four-year period

**B**ehind the successful implementations of Six Sigma and lean at General Cable-Indianapolis Compounds is a unique collaboration of union and management employees. "It's built on a shared attitude that's driving the push for continuous improvement," says Terry Jones, team coordinator and the plant's top union representative of the International Brotherhood of Electrical Workers (IBEW). Their achievements start with a shared attitude: "We're not satisfied with what we've got." Adds plant manager William (Buck) Wright, "Our associates come to work committed to make things better."

The plant's union-management team also shares other characteristics. For example, many of them have an intimate connection with rural and small town America, points out Susan Schroeder, HR manager.

Wright, proud of employee progress with Six Sigma and lean manufacturing, says their rural/small town connection is a heritage that helps support their performance. "With their rural/small town background, they tend to be effectively predisposed toward teamwork and collaboration." Wright, in fact, still lives in a rural environment near Terre Haute, Ind., about an hour's drive away from the plant.

Seniority is another shared characteristic. Jones, the union leader, has been with the plant for 19 years. Plant manager Wright has been with the compounding plant since it was built in 1982, when he served as engineering manager for the first owner, RCA.

The plant was originally built to manufacture the plastic com-



**Bill Scott tests tensile strength of EPR compound.**

pound for the RCA Select-a-Vision video disc. However, the disc was not recordable and the subsequent success of the VCR led to the closing of the plant in 1985.

Wright stayed through the purchase of the plant by Cablec, a wire and cable company in 1987, and then transitioned again when that company was purchased in 1989 by BICC, another wire and cable maker.

General Cable, by acquiring the power cable division of BICC in 1999, gained not only the plant, but also Wright and three other associates who were part of the original staff of the facility. The plant serves primarily as an internal supplier of polymer compounds to the company's wire and cable producing plants. Wright says 87% of the plant's active capacity currently serves the company's operation in the U.S. and Spain. The remaining production capac-

ity is used to market polymer compounds to competitors of General Cable.

The internal challenge, says Wright, is that other General Cable plants are not obligated to buy from the Indianapolis facility. Externally, on the open market, the Indianapolis plant competes with such companies as Dow, Borealis and ECC.

Wright attributes the product's acceptance to the implementation of lean and Six Sigma. But being the successful

supplier of choice brings its own challenges. For example, the plant is currently operating on a 24/7 schedule and product demand continues to grow, notes Reed Elkins, engineering manager.

To meet that growing acceptance, a third compounding cell is scheduled to begin operating in January, says Lee Montgomery, manufacturing manager. The \$4 million investment in equipment will increase annual volume by 23% and will increase the product line of available compounds by over 250%. The goal is to reduce dependence on custom compounds and reduce material expense.

The drive for manufacturing excellence is led by the plant's seven-year emphasis on Six Sigma and lean manufacturing. The supporting cast: Of 58 total employees, there are three black belts, five green belts plus one green belt in training. **tw**

# We're Wired for Manufacturing Excellence



General Cable (NYSE:BGC) is a global leader in the development, design, manufacture, marketing and distribution of copper, aluminum and fiber optic wire and cable products for the energy, industrial, and communications markets. With over \$5 billion in revenues and 12,000 employees worldwide, the Company serves customers through a global network of 46 manufacturing facilities in 22 countries and sales representatives and distribution centers worldwide.

Since 2001, General Cable has had nine plants selected as finalists in the Best Plants competition. Four of those plants have gone on to achieve the title of one of the Top 10 Plants in North America, including:

- Altoona, Pennsylvania, United States – 2003
- Moose Jaw, Saskatchewan, Canada – 2005
- Tetla, Tlaxcala, Mexico – 2006
- Indianapolis, Indiana, United States – 2007

**Congratulations to General Cable's Indianapolis, Indiana compounds manufacturing facility – a proud winner of the 2007 *INDUSTRYWEEK'S* Best Plant award.**

## Energy Cables

Underground High-Voltage and Extra-High-Voltage Cable



Bare Overhead High-Voltage Transmission and Distribution Cables



Low- and Medium-Voltage Distribution Cables



## Industrial and Specialty Cables

Cord and Cordset Products



Electronic Cables



Industrial Cables



Specialty Cables



Specialty Wire Harnesses



## Communications Cables

Data Communications Cables



Fiber Optic Cables



Telecommunications Cables



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