

CONVERSIONS

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WINDMOELLER & HOELSCHER CORPORATION

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W&H In-house EXPO

November 10th-12th, 2009, Lengerich, Germany

World Premier of New Technologies in Extrusion, Printing and Converting

W&H's Research & Development Department continues to make ground-breaking technological advancements that will carry our customers' businesses and the industry forward.

At our In-house EXPO this November 10th -12th at W&H corporate headquarters in Lengerich, Germany, W&H will unveil new technologies that are best seen in person, operating on the floor, with the people who created them.



Here's what we'll be showing:

BLOWN FILM

- New generation 3-layer W&H blown film line
- **AQUAREX** blown film line with water quench cooling
- High-output **OPTICOOL** air ring
- 3-layer **VAREX** line running biofilm resins made from renewable resources
- New **MDO** stretch line for barrier films

CAST FILM

- **FILMEX** line running nano-technology multi-layer stretch film

FLEXOGRAPHIC PRINTING

- **VISTAFLEX CM** 8 color: The most productive press on the market, fully automated with speeds up to 2,650 fpm
- **EASY-SET S** and **EASY-REG S** auto impression and register systems
- **EASY-COL** with new color recipes and dosing system
- **MIRAFLEX CM** 8 color with speeds up to 1,650 fpm
- **NOVOFLEX CM** 10 color with speeds up to 2,600 fpm

GRAVURE PRINTING

- **HELIOSTAR S** 10 color at nearby customer plant. Advance registration required
- **HELIOSTAR G** 8 color
- **HELIOCONTROL** register system

CONVERTING

- **POLYREX**, **MATADOR** and **TRIUMPH** bag machines
- **AD CONVERTEX** heat seal valve sack machine
- Other woven machines, including tape extrusion, laminating and looms will be shown at a separate EXPO at BSW in the Czech Republic.



It will be an exciting few days for all. We hope to see you there.

For more information about W&H's In-house EXPO, please contact Catherine Mattson-Fimmers at cmfimmers@whcorp.com.

President's Corner

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President's Corner

By HANS DEAMER

The Human Factor

A while back, our good friend, Bill Troost from Peel Plastics, kindly sent me *The Human Factor* by Kim Vicente, a book which discusses a subject very close to my heart ... the interface between technology and humans.

The brilliant engineers and scientists who develop new technologies are generally very bad at designing intuitive and simple user interfaces. Just think of the millions of digital clocks flashing "12:00" and the thick book of instructions that comes with every electronic gadget, including a new digital set back thermostat I recently tried to program, which as the instruction book told me, reset itself back to default settings if within one minute you have not carried out the full page of instructions needed to enter the times and temperatures ... which it did 10 times or more before I gave up in disgust!

This lack of user friendly interfaces between technology and humans can result in some really devastating and life changing consequences.

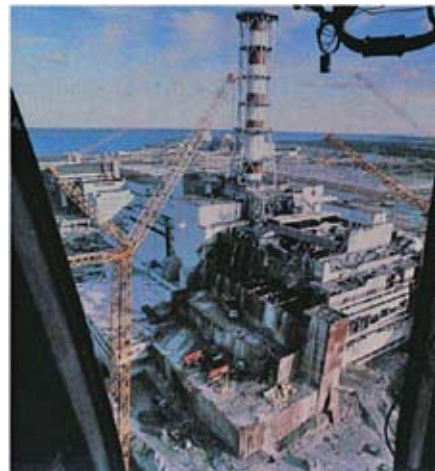
Chernobyl

The smug myth would have us believe that the nuclear disaster at Chernobyl in 1986 was caused by inferior Russian reactor design, but this is far from the truth.

At midnight on Friday, April 25th, Leonid Toptunov, the 26-year-old night shift technician, took over in the control room. The reactor was running at only 25% capacity because the emergency systems had been shut down for routine safety testing. But this test had been delayed by 9 hours and then the shifts changed without reengaging the emergency system.

The control and indication panels which spread right across the vast operation room, were laid out in such a complex way, that while Toptunov soon realised that things were not all as they should be,

the signals he saw were very confusing and inconsistent. In an attempt to stabilize things, he turned the reactor down further until it reached only 7% capacity. The trouble was that this type of older reactor design became more unstable at very low outputs and at 1:22 am, before he could absorb what all the warnings, alarms and indicators meant, the reactor exploded, blowing off the 1,000 ton steel and concrete cap and exposing the molten core with radioactive dust reaching almost a mile in to the sky and creating the devastation we all know about.



Chernobyl, Courtesy of Wikimedia Commons
Three Mile Island

This power plant was built in the 1970's at a cost of \$700 million and it had only been in operation 4 months before it too catastrophically failed at 4:00 am on March 28th, 1979 ... 7 years before Chernobyl.

Basically a very similar thing happened. A critical valve was shut off during routine maintenance but the vast and poorly-designed operator control panel did not give the technicians a clear indication what was happening or what to do about it. As hundreds of alarms went off, the core heated up rapidly, boiling away the cooling water and finally reaching over 5,000° F and melting away over 60 tons of the most advanced high temperature ceramics and alloys in existence.

Ironically, there was a data collection printer running, which told the whole story in graphic form, but this was timed to record with a two hour delay.

There was almost a complete meltdown ... the "China syndrome." Luckily this was avoided only by sheer luck and determination. The clean up cost was over \$1 billion and took 15 years.

Both accidents at Chernobyl and Three Mile Island could have been avoided if the operator interface had been designed to be much simpler to understand with a central summary readout of the critical data.

There are 432 nuclear plants operating around the world supplying almost 20% of our electricity needs.

Car Technology

In 2002 when BMW introduced iDrive in the new 7 series, not even the top BMW executives knew the number of functions which could be controlled by this one central knob. The answer: over 800! Just try using it.

A few years ago, Mercedes decided that the old fashioned oil dipstick should be eliminated and the oil level should be checked from the drivers seat. It required 6 steps to make this check. It always seemed to me that the dipstick worked fine and frankly, I don't trust the electronic reading on my Mercedes, even when I can remember how to get it, but there is no other way of checking the oil.

Hospital Deaths

There are up to an estimated 100,000 avoidable hospital deaths per year just in the U.S., or the equivalent of one wide



President Carter at 3 Mile Island
Courtesy of Wikimedia Commons

President's Corner



BMW iDrive

body plane crashing in the U.S. with no survivors almost every day.

There are many causes, including doctors and nurses working up to 30 hour shifts and up to 120 hours a week but one major reason is a lack of adequate, easily understood instructions for the administering of medications and for the avoidance of using multiple medications which can cause dangerous or fatal reactions when mixed.

Another major factor is fear. Given our "ambulance chasing" legal system and a "penalization mentality" for any medical mistakes or errors which occur, hospitals, doctors and nurses tend to hide or cover up errors they make. They are human after all and we ALL make mistakes.

Lawsuits and the "punishment" syndrome actually increase hospital deaths, as only a fraction of medical errors come to light as a result. This prevents a systems approach to avoiding errors by using information obtained from nurses' and doctors' own personal experiences and hence making simple changes to prevent them.

Aviation

The hospital death fiasco is an incredible contrast to the aviation industry where in the U.S., an average of only about 200 deaths per year occur for the around 10 million annual U.S. commercial aviation take offs and landings.

It was not always this way, as prior to and especially during World War II, hundreds of plane accidents occurred, caused by pilot error, which were in turn largely caused by poor design of aircraft controls. An example: many planes crashed on landing because the flaps lever was identical to and right next to the wheels down lever.

Pilots focusing on doing their jobs pulled the wrong lever, retracting the landing gear instead of the flaps. We were losing so many young pilots and expensive planes, that

an investigation was started which led to a program where pilots could openly report their errors or near misses and the reasons for them with no fear of retribution. The result was multiple changes in control design and placement with a real focus on operator-friendly designs. For example, early changes included the wheels down lever being fitted with a disc-shaped knob and the flaps lever with a wedge-shaped knob.

This pilot reporting program is still in existence and has been a very major contributor to air safety, reducing commercial aviation accidents to a miniscule number.

Gore should have been President!

If you look at the facts on the Miami County election ballots revealed long after the election, Al Gore should have been elected President in November 2000.

In the count, Bush beat Gore by only 500 votes country-wide, yet in the critical Miami County poll, outsider Patrick Buchanan got about 2,400 votes more in Miami County than he should have, judging by other poll results.

Why? ... Because the "butterfly" paper ballots used in Miami were so badly designed.

Later tests by the University of Alabama demonstrated that it was far too easy to punch Buchanan's name thinking you were voting for Gore.

Don't believe it? Well, 19,200 Miami County votes were discarded and not counted because they were punched twice, once next to Buchanan's name and once next to Gore's name. It appears that after punching for Buchanan, the voters realized their error and tried to correct it by punching again for Gore.

Best estimates are that Gore should have WON the 2000 Presidential Election by at

least 15,000 votes! I make no judgment on who would have made the best President, but, for sure, the world would be different today but for this poor human interface with fairly simple technology.

Flies on Urinals

Visitors to Europe are sometimes surprised to see a fly imprinted inside the porcelain urinal in men's rooms ... on some designs, it's a printed candle.

These urinals were designed for minimum "splashing" but only if the "stream" was directed to the right spot.... hence the fly or candle. We men have a natural subconscious need to point at the fly or candle so hitting the optimum low splash spot without even knowing we are doing it. Natural human engineering!



European Urinal with Fly Image, Courtesy of Google Images

Operator Friendliness

We at W&H have tried very hard over the last few years to develop simple, intuitive and very easy to use touch screen controls for our machines and I think we have succeeded, although I admit that 10 years ago, our operator panels were a jumble of random, hard to use buttons, switches and lights made worse by using icons or symbols instead of words ... just like Chernobyl or Three Mile Island!

As I look at the 150 page instruction book for my new digital camera ... and realize I will never be able to remember half the features and functions, I have decided to return it and buy the simplest one I can find.

What's new in Printing

VISTAFLEX C: The Most Productive Press on the Market

VISTAFLEX C, the new fast change flexo press for wide-web applications from W&H, makes fast changeovers, minimum waste and high speeds an everyday reality.

Mandrels are stored within the VISTAFLEX envelope and moved fully automatically using high speed robots, which eliminate the use, handling and storage of large, expensive, and heavy bridge sleeves.

Available in both 8 and 10 color versions, the VISTAFLEX is capable of speeds up to 2,650 fpm (800 mpm) and with a maximum repeat length of 49" (1,250 mm). Changeover for a 10 color job is

completed within 9 minutes with the push of one button.

W&H has sold several VISTAFLEX C presses for delivery to customers in Europe, Asia and the United States.



VISTAFLEX C

TURBOCLEAN Pump Exchange Program

W&H can refurbish your pumps, saving you time and money.

With our new TURBOCLEAN Pump Exchange Program, all you need to do is order W&H refurbished pumps. When they arrive, send us your old ones back.

Refurbished pumps are:

- Overhauled in a clean room environment
- Priced the same as repair kits
- Covered by a full, 12-month, no questions warranty

Plus ... you save money by reducing maintenance costs and eliminate the possibility of assembly errors.

For more information, contact Javeed Buch at jbuch@whcorp.com.



Refurbished TURBOCLEAN Pump



TURBOCLEAN Pump Refurbish kit

QUOTES

Your brain may give birth to any technology, but other brains will decide whether the technology thrives. The number of possible technologies is infinite, and only a few pass this test of affinity with human nature.

- Robert Wright

Effective action is always unjust.

- Jean Anouilh

A little less conversation, a little more action ...

- Elvis Presley

The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty."

- Sir Winston Churchill

Tough times don't last, tough people do.

- Gregory Peck

The problem is not that there are problems. The problem is expecting otherwise and thinking that having problems is a problem.

- Theodore Rubin

Some folks are wise and some are otherwise.

- Tobias Smollett

A successful man is one who can lay a firm foundation with the bricks others have thrown at him.

-David Brinkley

If you can count your money, you don't have a billion dollars.

- J. Paul Getty

What's new in Printing

Interflex Group Purchases First W&H Press

The North Carolina-based Interflex Group has purchased its first W&H press: A 67" NOVOFLEX CM 10-color.

With the company experiencing rapid growth on top of expanding into new



Interflex Group's Headquarters

markets, Interflex recognized the need for a wide, fast press with advanced capabilities and felt the NOVOFLEX would be the best machine for the job.

Jeff Zeber, who recently joined Interflex as Senior Vice President, says, "I've worked with W&H equipment for years at previous companies and have always been impressed with the quality and production efficiencies we were able to achieve as well as W&H's excellent service."

Interflex will use the press, which is scheduled to be running in the fourth quarter of 2009, to print BOPP,



NOVOFLEX CM

polyester, and polyethylene primarily for the food market.

The NOVOFLEX CM 10 is available in web widths of up to 67" and has a maximum repeat length of 34.5". Speeds of up to 2,650 fpm are available.

Admiral and W&H: 27 Years and Counting

Back in 1982, Rhode Island-based Admiral Packaging (then Union Industries) invested in an Olympia 726, its first flexographic press from W&H.

Twenty-seven years and seven W&H press purchases later, Admiral has ordered their 8th line: A 52" 8-color MIRAFLEX CM with TURBOCLEAN, EASY-SET and EASY-REG, that runs up to 1,640 fpm (500 mpm).

Harley Frank, President of Admiral,

says, "We have seen tremendous advancements in technology since our first purchase back in 1982. At Admiral, we are committed to lean manufacturing and eliminating waste.



The Admiral Team in 2008

Our first gearless press, the NOVOFLEX CM 10 has enabled us to do exactly that, by increasing quality, speed and productivity. This generation of press lets us focus on shorter cycle times."

"We've had tremendous success with the NOVOFLEX and decided to acquire another W&H press. We are anxiously awaiting the arrival of the MIRAFLEX!," adds Frank.

Klaus Kleemann of W&H comments, "We are proud of our 27 years with Admiral, our RI neighbor, and look forward to continuing to offer them press

solutions that meet their business needs."

Admiral Packaging is a 4th-generation, family-owned company and one of the country's largest independent producers of flexible packaging.

NEW EASY Modules Microsite

Check out the new W&H EASY Modules microsite to learn about EASY-SET, EASY-REG and EASY-COL using the link on www.whcorp.com.



For more information about the EASY Modules, contact Klaus Kleemann at kkleemann@whcorp.com or Michael Reinhardt at mreinhardt@whcorp.com.

What's new in Extrusion

ISO Poly Films, a Sigma Plastics Group Company, Staying Busy

It's been quite a busy year for Gray Court, South Carolina-based ISO Poly Films. In an economic climate that has left many companies treading water, ISO Poly has grown its sales, formed a strategic partnership, and has added three new W&H VAREX co-extrusion lines.

Back in February, ISO Poly Films and Sigma Plastics Group announced their strategic partnership, which was designed to combine the companies' expertise in product development, film quality, advanced production systems, as well as their market presence, to create a strong position for additional growth.

To advance this goal, making investments in top-of-the-line equipment for the production of barrier films has been a necessity. ISO recently acquired a 5-layer, 63" VAREX co-extrusion line as



Peter Steinbeck, Hans Deamer, Jon McClure, Alfred Teo, Mark Teo, Andrew Wheeler, Juergen Peters, and Nick Nigro

well as a 3-layer 110" VAREX line, both of which were installed this summer.

The third machine, a high-output 7-layer 87" VAREX line with grooved-feed extruders, a 20" MAXICONE die with an OPTIFIL P2-K gauge control system, and

a FILMATIC S dual surface winder is scheduled to be running in the first quarter of 2010.

"It's important to continue investing in the growth of our company and increase our capabilities to produce specialty films. Our partnership with Sigma Plastics boosts our ability to get stronger and bigger at a time when other companies are contracting," states Jon McClure, Founder and President of ISO Poly. "Our new co-extrusion lines from W&H are vital to our growth and provide the latest technology to manufacture advanced films with superior quality and complex structures for the markets we serve," he adds.

As part of the strategic partnership, Alfred Teo, Chairman of Sigma Plastics, has become Chairman of the Board of ISO Poly Films.

FOCUS ON SUSTAINABILITY

Next Generation Films Growing Green

Next Generation Films Inc. of Lexington, Ohio is on a mission to lower its carbon footprint and double sales over the next 5 years.

Dave Frecka, Next's founder, has broken ground on a new 100,000 sq. ft. wind-

powered recycling center, where scrap will be repelletized and used in-house, making Next a net zero scrap producer. Where's the wind power coming from? Next's soon to be installed on-site wind turbine!



Next Generation Films' expanded campus

Using his own patent-pending nanotechnology, Frecka has developed nylon barrier alternatives to reduce the amount of raw materials needed for the production of 3-layer films that are both recyclable and as strong as some 5- and 7-layer films. Next has experienced 100% sales growth over the past four years, expanded its corporate campus, and recently purchased

two new 3-layer VAREX co-extrusion lines from W&H.

Frecka says, "W&H lines are the best in the world. They helped us get to \$100 million in sales. With the addition of these two 3-layer VAREX co-extrusion lines, we will be well positioned to meet the demand of Fortune 500 contracts and to reach our goal of \$200 million in the next five years."



Tell us about your company's sustainability initiatives

What's new in Converting

First Complete Pasted Valve Line Sold in U.S.

At the World Premier which took place at dy-pack's plant in Germany in October 2008, W&H introduced their new AD 8330 digital bottomer which uses precision digitally controlled nozzles to apply paste, completely eliminating paste pads and related changeover parts.



AD 8330 Digital Bottomer

Paste patterns for different bag sizes are simply selected from the touch screen menu, reducing size changes to seconds.

Several of these new bottomers have been sold and we are delighted to report that WHC have just sold a complete

pasted valve line comprising a AM 8125 tuber, an AD 8330 digital bottomer and ACROMAT 3 to a North American customer. This line will be up and running production in May 2010.

The W&H Group's Range of Woven PP Equipment

BSW (Bag Solutions Worldwide), a W&H subsidiary company, produces a wide range of equipment for manufacturing woven PP including:

- **tiraTex** tape stretching lines
- **filaTex** tape winders
- **advanTex** circular looms
- Tubers
- **sacoTex** tube cutting and sewing lines
- **AD CONVERTER** valve sack machines
- **ecoTex** coating and laminating lines
- **POLYTEX** tubers

With rapid growth in the US market for woven/laminated PP sacks for pet food, seed and other products, BSW offers a full range of machinery backed by W&H's global service and parts organization.



AD CONVERTER

For more information on converting equipment, contact Heine Heininga at hheininga@whcorp.com.

TIDBITS

- Average National Savings Rate among G7 nations: 23.7%
Savings rate in the U.S.: 13.6%
- Number of deaths in 2008 attributed to road rage: 370
- Number of Chinese who climbed out of poverty between 1990 and 2004: 400 million
- The year when China is expected to have more PhD scientists and engineers than the U.S.: 2010
- Average hourly wage for workers in the U.S.: \$17.94
- Starbucks' store sales have gone down about 10% over the last year; McDonald's sales have gone up 5.5% over the same period.
- Wal-Mart sells 100 billion individual products annually, which translates into about 333 items per capita.
- Given Wal-Mart's stated goal of a 5% reduction in all of its packaging by 2013: If just 1 gram were removed from every Wal-Mart product, that would take 110,000 tons of packaging out of circulation – the equivalent of a line of 10,000 trash trucks stretching 38 miles.

About Wal-Mart:

- Wal-Mart has \$43 million in hourly sales, 365 days a year. They make about \$24,500 in profit each minute of every day.
- 62% of Americans live within five miles of a Wal-Mart store and 99% live within 25 miles of a store.

W&H People In The News

Marketing



Catherine Mattson-Fimmers has joined W&H as Manager of Advertising and Public Relations.

Catherine brings strong experience in advertising, marketing and public relations in the U.S. and

Germany, with diverse client accounts such as SmithKline Beecham, Allied Domecq, and Citibank.

Catherine received a BA in Communications and an MSc in International Marketing.

She lives in East Greenwich, RI with husband Jürgen and sons Jan and Nils.

Welcome, Catherine!

Service



Vikrant Tandon has taken on a new roll as Technical Manager of the Press Department, replacing Markus Kronigfeld, who much to W&H's disappointment, took a post with a W&H customer in the South.

Upon originally coming to W&H, Vikrant worked in IDC for presses in both India and the United States. His press background along with his previous experience as Technical Manager of the Extrusion Department have made for a seamless transition.

Jürgen Peters will take over the installation of extrusion equipment in addition

to his other duties, until a permanent replacement for Vikrant is found.

Intern



Farewell to Julius Vutz, our summer intern from Germany.

Julius rotated through W&H departments, and impressed us all with his maturity, intelligence and focus. This fall, Julius will enter university in Germany, where he plans to study economics.

Thank you and good luck, Julius!

NPE 2009 Wrap-Up

While planning for NPE 2009, we were optimistic that it would still be an important show for W&H, even though large trade shows are losing attendance and perhaps even relevance.

We found an enormous amount of interest from Central and South America during NPE 2006, especially from customers that were reluctant to travel to Germany for the K Show, but welcomed the idea of Chicago in June. When the economy went South at the end of last year, our hopes for high turnout at the NPE diminished.

SPI has reported that turnout was down by 30% from '06. The attendance at our booth, however, was excellent

and we were busy with old friends and new customers alike. The quality of the visits was outstanding. NPE, as the



W&H Booth at the NPE with TOPAS FFS Machine

largest Plastics show in this hemisphere, remains a vibrant and vital show and "tire kickers" were virtually non-existent. Willi

Mueller, the head of W&H's South American office, reported that NPE allowed them "to make 3 months worth of quality customer visits in a week".

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