

CROWN CRIER

Since 1971

Crown International, Inc. Employee Newsletter

Nov. - Dec. 1995

The Paint Line Takes a Powder

By Mark Stucky and Libby Marshall

The wet-coat paint process is no more at Crown International. The vacated space in Plant 2, devoted to the Paint Line since Dan Lutz managed its design and start-up in the late 1970s, is being cleaned up for other processes. Gone are the fumes, hazardous waste, and a process that coated Crown amplifier and microphone parts for more than 15 years.

Crown is one of only a half dozen companies in Elkhart that have replaced the old-style wet-coat process with a new powder-coat system, an environmentally friendly process that offers cost-effective, consistent, one-coat coverage. Crown's new system is also one of the most sophisticated among Elkhart businesses.

Price

As Fabcom Engineering Manager, Dan Lutz managed the research, design and implementation of the powder-coat system that started September 25 in the new addition to Plant 3. Jim Fisher, Fabcom Manufacturing Engineer, was project engineer for this \$700,000 system. Don Florea, Facilities Manager, coordinated the nearly \$400,000 building expansion, making this the largest single process investment ever for Crown.

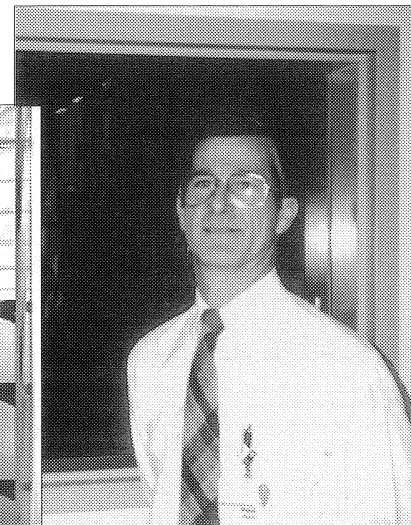
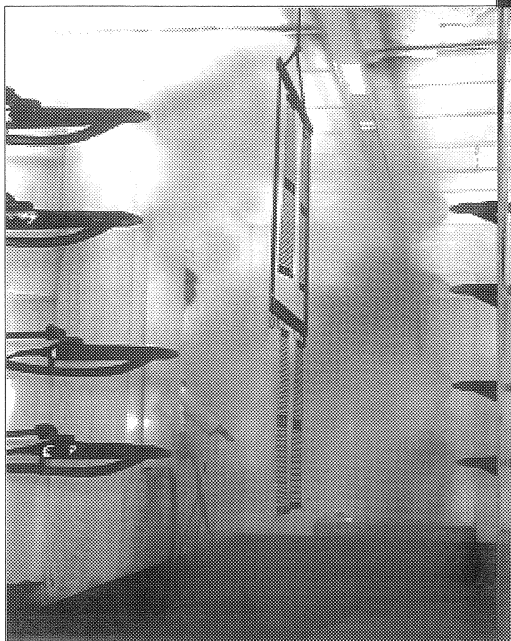
Although the expansion was expensive, in the long run the costs of the powder coat system will be less than the old system. The cost of raw materials and labor in the powder-coat process is half that of the old wet-coat process.

Not only is the cost per part less, but the environmental cost is much less. According to Tom Hornblower, Environmental Techni-

cian, hazardous solvents and noxious fumes are eliminated.

Cleaning solutions and excess powder are captured and reused in the process. Tanks of cleaning solutions now last four times longer than those used in the wet coat process. In the wet-coat process, a third of the paint was overspray and became waste, but the powder-coat process recycles excess powder, reducing waste to below one percent.

The small amounts of waste products that are generated are completely inert, non-hazardous, and non-flammable. As a result, Crown already meets any foreseeable Environmental Protection Agency regulations on clean air.



Technical Specialist Paul Ferry standing by the window looking into the application booth, seen at left.

Process

Anyone who ever used a can of spray paint could intuitively understand the old wet-coat paint process, but how does the powder-coat process work? Finish in the form of powder is sprayed on a part. The metal part is electrically grounded and the powder has an electrostatic charge of up to 90,000 volts. The electrically charged powder particles adhere to the metal surface like socks sticking to your fresh-out-of-the-dryer sweater. The powder is then fused to the surface by curing the parts at 400 degrees Fahrenheit.

Items to be finished at Crown start the process by being hung on racks attached to a 601-foot conveyor system that travels at about seven feet per minute. The racks can hold either two amplifier chassis or up to 18 small parts.

Since paint can only adhere to surfaces free of any contamination, the parts are

(continued on page 2)

Configuration Management Control

by Patti Smith and Libby Marshall

Patti Smith, Administrative Resources Manager, announced the promotion of Jan Smith to Manager of Configuration Management, September 29th. In her new role, Jan will provide leadership for the Configuration Management Department, formerly known as Bill of Material and Document Control administration.

A steering committee was formed to define, design and plan implementation strategy of a management system for the technical documentation of all Crown products. Serving with Jan in this endeavor are Ron Reynolds and Fred Sims. They have scheduled a one-year implementation program with 30-day major milestones to be achieved.

The Mission

"Design and implement in the third quarter of 1996 a Configuration Management system to provide a fast, accurate and systematic approach to:

planning, identifying, controlling and accounting for the as-designed, and as-built, technical documentation of Crown products from their inception to end of life."

Jan said, "We are going to make our lives better at Crown!" Specifically, the goals for the CM team include: satisfy customers with the same products with each delivery; and configuration information on all technical documents including parts drawings, specifications and bills of

material. It is planned that every product will go through the five developmental stages:

- 1) concept
- 2) definition
- 3) development
- 4) production
- 5) phase-out

Working with the Steering Committee are team members Kay Haas, Gordon Scott, Roy Pickler, Tom Szerencse, Roger Sunday, Dawn Pease, Greg Neff and Russ Jones. Planning, engineering, production and procurement functions, all divisions and corporate services are represented. Their efforts are expected to provide the system for the control of all technical product documentation and complete effective communication between design engineering and the rest of the Crown organization as well as our customers and suppliers. ☺

EMPLOYEE COMMITTEE FINANCIAL REPORT

As of December 15 1995:

Balance in

Savings Account: \$1,724.94

Checking Account: \$ 62.74

Total On Hand \$1,787.68

Paint Line, continued

cleaned in a five-stage power spray washer. Then the parts are dried as they pass through the 67-foot combination dry-off and cure convection oven.

After thorough drying, the parts enter the powder application room. Automatic sprayers apply the powder. A person inspects the parts, as they move past the application guns, and touches up missed spots, such as in deep recesses or corners, with a hand sprayer. Powder that does not stick to the parts is pulled out by a down-draft of forced air and recycled.

The parts are then conveyed back through the convection oven. After curing at 400 degrees, the parts are removed from the conveyor. The entire process takes about 80 minutes.

People

The new powder coat system technical specialist, who started working here August 28, is Paul Ferry. Paul brings 26 years of experience to Fabcom. At Toefco Engineering in Niles, Michigan, Paul worked with Teflon, custom, and powder coating technologies. He served as Quality Assurance Manager, Safety and Environmental Director, and Compliance Officer.

Paul was used to high volume production. Forty to sixty thousand pieces per day during two shifts was typical for a large automotive contract with which Paul worked at Toefco.

He is enthusiastic with the progress in Fabcom and said, "I am thrilled at the opportunity to work with this new system at

Crown International." He said our Nordson equipment comes with good technical support and is the top-of-the-line.

High-tech equipment, however, is useless without quality operators and teamwork. Fortunately, "Crown's people are fantastic," according to Paul. "They are very cooperative, concerned about the parts and good at communicating concerns and information."

Although the powder coat personnel are fine-tuning the process (such as determining the best ways for setting the spray guns and hanging parts on the conveyor), an eight-hour shift can already do over 1,600 pieces. With some smaller parts, they have topped a 2,000 piece count. They are well on the way to maximizing this highly productive and environmentally friendly system. ☺

Clyde W. Moore, Chairman of the Board Recognized for 30 years of service



At the December 1st meeting of the Board of Directors, Ruby Hunsberger, co-founder of Crown International, presented a plaque to her son Clyde Moore, recognizing him for 30 years of service as an executive of Crown.

Let the Christmas Season Begin!



Beautiful music by the Bethel College Choir highlighted the entertainment for the annual Crown International Christmas banquet at Century Center in South Bend December 1st. Getting dressed up, talking to friends, eating a wonderful dinner and considering the Christmas story, as read once again by Clyde Moore, made it an occasion to savor throughout the holidays. Thank you to the Board of Directors, Madeline Smith and the committee which made it happen, and to Dean Frick for the picture!

The Best of Disney

by Tim Bock

Editor's Note: Danny and Iris Bock were our cover children for the December 1994 issue. We thought readers would take delight in picturing this!

Sue, my wife, summed up our DisneyWorld experience like this: "This entire experience was something I will *never* forget. Watching our son Danny and daughter Iris as we anticipated our trip, seeing Danny's face light up at the Give Kids the World (GKTW) gates and hearing him exclaim "Oh my goodness!" when we first arrived at Disney World was overwhelming.

As an adult, one can miss so much. Through a child's eyes, life has much *more* meaning. We will relive this experience for years to come through the memories, a multitude of photos and videotape."

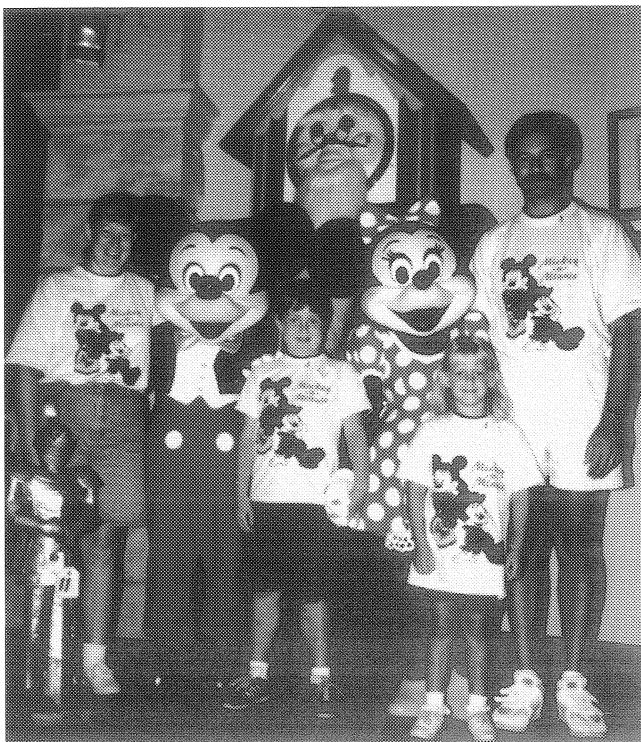
Our son, Danny, was recently granted a wish by the Make-A-Wish Foundation and Give Kids The World (GKTW) Foundation. Danny was diagnosed September 6, 1993, with Duchenne Muscular Dystrophy, a disease which causes the muscles to slowly degenerate, resulting in eventual loss of mobility at approximately age 10 to 12 and death sometime between the ages of 14-24. At this time, Danny is mobile without any aids and is taking medication which facilitates mobility.

Sunday, October 2, 4:30 a.m.

A limousine arrived at our home. The excited children, Sue and I jumped into the limo which whisked us to the airport. Before we disembarked at Orlando, Florida, the pilot asked Danny to come to the cockpit, wear the captain's cap and sit at the controls.

"Welcome to Florida, Danny and family," said Bill the greeter from GKTW. "Here's a car provided by Budget Rent-A-Car for your use during your stay at GKTW." We followed the thorough instructions provided by Bill and easily found the GKTW village.

"Wow, are we staying here?" exclaimed Danny, as we pulled up to the pink gates, behind which sat a fairy tale-looking village. After announcing our presence into the intercom, we watched as the gate opened to permit us entry. The GKTW reception staff gave us a brief orientation and warm wel-



Sue, Mickey Mouse, Danny, Minnie Mouse, Iris, and Tim Bock

come complete with stuffed Mickey Mouse and Shamu animals, a "budge pass" (badge) for Danny and a booklet describing the many wonderful services GKTW offered to Sue and me. Our living quarters for the week were in a duplex with all the comforts of home, including a washer and dryer.

After unpacking and resting a bit, we strolled over to the "Gingerbread House" for supper. Danny and Iris were wide-eyed with delight when we entered. The room seemed magical with dolls on a plate rail surrounding the room, a piano (without a player!) playing Disney tunes and tables inlaid with peppermint candies.

Following supper, we walked over to the "Castle of Miracles" (a giant mushroom) where there was an arcade. Danny exclaimed, "You don't need money to play the games, Daddy!" Besides a puppet theater, there were two special rooms. A playroom was filled with Legos, dolls, many toys and a magical mirror in which our images appeared with a royal robe and crown. The second room was replete with

caves, tunnels, and a magic slide that talked. To wrap up the day, we visited the "Caboose Ice Cream Parlor" where we indulged in ice cream cones and sundaes.

Monday - Wednesday

Our family was identified by "Danny," "Danny's Sis," "Danny's Mom," and "Danny's Dad" imprints on our T-shirts which were provided by Patti Smith and the Administrative Resources staff.

From a carousel ride and photo session with Mickey and Minnie Mouse to Splash Mountain in the Magic Kingdom and to Epcot Center, these days were full of magical fun and fantasy. The kindness of the Disney staff over-

whelmed us. In addition to letting us take advantage of Danny's "budge pass" and avoid waiting in lines, they joked with Danny, called him by name, and treated him like a king! He felt very special!

Thursday

We visited the Gulf of Mexico at a Clearwater beach. That day ended with a game of miniature golf at Pirate's Island Adventure Golf—Danny's favorite sport.

Friday, October 6, 1995

It was an emotional checkout at 11:00 a.m. We were presented with an 8x10 family picture taken with Mickey and Minnie Mouse, and a "World Passport for Kids" that provides us complimentary admissions to amusement parks in 1996.

Our final treat was to visit Universal Studios where lunch was provided by Hard Rock Cafe (HRC). The HRC manager gave Danny and Iris T-shirts and honored Danny by granting his request to play "Born to be Wild" on the sound system. ☺

Customer Comments

Contributed by Bruce Bartlett

Dear Bruce:

I wanted to take this opportunity to thank you and Crown International for the use of three microphones for our fall play. I had literally dozens of comments on the quality of sound. Everyone was amazed that we were able to achieve such clarity in an auditorium.

I have also enjoyed your technical assistance, and look forward to working with you on our spring musical.

Once again, Thank you!

Terry P. Smith
Director of Drama
Marian High School
Mishawaka

Sound & Communications Magazine Product Check

•Sound & Communications Magazine reports that Crown amplifiers are second only to Altec Lansing as the most used amplifiers in United States sports venue installations in the last six months and for installations in progress.

•Their recent "Product Check: Worship Centers" found Crown microphones second only to Shure in the last six months and in currently-in-progress, worship center installations.

•Secom, a Crown rep/distributor in Atlanta, Georgia, is one of the six rep/distributor organizations having the best relationship with contractors in the United States in 1995, according to the Sound & Communications 10th Annual Survey. Their name was inadvertently omitted from our October Crown Crier list. We apologize!

First Production Reference Amplifiers



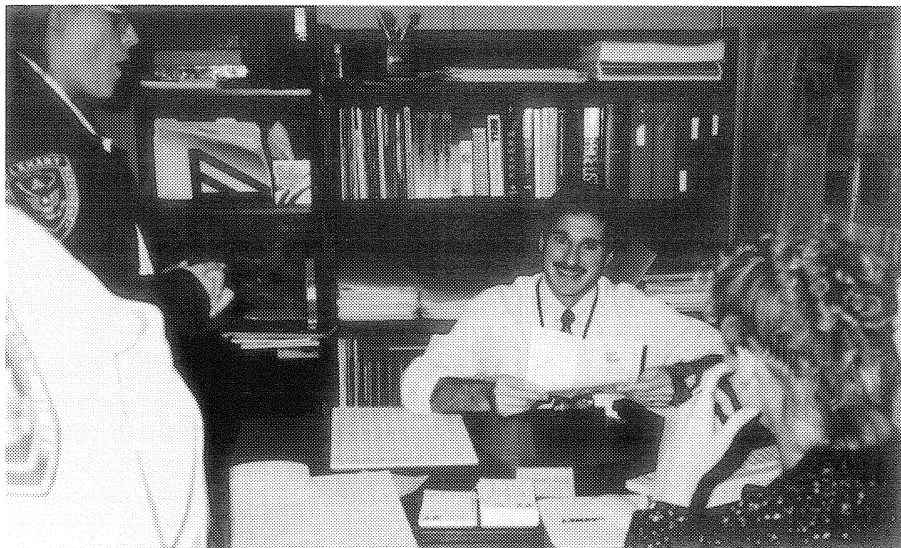
The Audio Division of Crown has received excellent customer response for a new series of amplifiers with a special front panel appearance. The first units are now flowing from Audio Line 9 to fill orders entered even before production began. Some of the Crown employees involved in this successful project are pictured, left to right: Bob Leininger, Ron Bradford, Randy Schlemmer, Paula McBrier, Angie Roll, Robert Smith, Ginger Green, Ron Taylor.

Greg Neff Arrested

by Libby Marshall

Two uniformed ladies approached Greg Neff in his office Friday, October 27th. They read the following:

- "Warrant for the arrest of Greg Neff, of Crown International, who has been accused of " (1) Verbal harrassment to the female population;
(2) Fraudulent representation as hair consultant (he likes to point out when his cohorts are having bad hair days!);
(3) Impersonation of a tall man."



They led him forcefully through the front lobby to a squad car waiting outside the door, red lights flashing. It was funny until then.

In little more than an hour, from his jail cell Greg raised \$450 dollars bail to meet the terms of the March of Dimes "Jail and Bail for Healthier Babies" campaign. There is nothing more valuable to a Purchasing Agent than the loyal support of his suppliers! Greg had the foresight to take his Rolodex with him.

Congratulations to Greg for doing his part for a good cause! ☺

Left: Greg Neff reading his summons.

Update on the Network

by Cilla Meachem

As many of us are aware, the Crown computer network has had various problems in recent weeks. These problems, while not nice for any of us, made us realize just how fast the network is growing. The hardware side of the network has served us well for a number of years, but is now beginning to show its age. Information Systems has taken this whole situation as an opportunity to greatly improve the network hardware and its management software. Before long the network will be a much stronger and faster tool for Crown.

When any of us use a computer, either a standalone unit or connected to the network, we need to remember the importance of good housekeeping. This includes reviewing our lists of files on a regular schedule. It is often very surprising how many files there are that are either no longer needed or could easily be moved to diskettes. Another op-

tion is to contact Support Services (8411) to request a backup of your local drive(s). Your network drives are backed up automatically several times each week. With the many changes that are taking place on our network, it will be a big help to the Network Administrator (**Kevin Branch**) and Support Services (**Rhonda Chapman, R. J. Jones, Cilla Meachem**) if you will take time in the very near future to do this kind of housekeeping. Just think of it as a year-end inventory. If you have any questions about this or the coming network changes, please contact Support Services. ☺

Flu or what?

Stomach cramps, diarrhea, digestive failure!! Uh, oh, the flu has got you!

WRONG! Something got you, but it is not the flu, according to Dr. Donohue in his *Elkhart Truth* column. "Intestinal flu....is a misnomer, a medical contradiction," which somehow got into our health talk. Flu shots will not prevent this kind of stomach or intestinal upset.

Shots will help prevent the respiratory virus which causes the "real flu." Also, Amantadine and Rimantadine, prescription drugs, help dampen the effects of flu.

What are the effects of flu? This respiratory viral infection causes high fever, severe muscle pain, a dripping nose and a cough.

Now you know! Avoid it, by all means!

The Last of the 8607s

by Libby Marshall

Red balloons floated over the four corners of the last cartload of 8607 amplifiers bound for General Electric for the magnetic resonance imaging (MRI) marketplace on Thursday, October 26. But as they pushed the cart to the shipping dock, the Techron team members smiled through tears.

Both product and people are especially significant. The 8607 was the last in the first series of high-powered industrial amplifiers made specifically for the MRI market. The original team of thirty, known as Line 6, worked in Plant 1, in space now used by engineering. It was the first line to work in Plant 2A when it was new and the first in the Plant 3 extension. Renee Wininger, Mary Chupp, Carol McQueen, and Joyce Malcolm have been with this line since its origin in 1983.

The methods and cooperation they developed have marked their work and relationships over the years. They laugh about some of those marks (Crown Scars) such as the one on Mary Chupp's hand, cut when she tried to move a metal shelf for the transfer to Plant 2A.

Methods have changed dramatically. They used to cut resistors by hand to put on the emitter boards, and they built their own heat sinks from scratch. Mary Chupp became known as "the buss bar girl" because of her skill in soldering resistors with wires onto copper bars 12 inches long and only one-quarter of an inch wide. This has to be done precisely enough that the buss bar will then fit in a fixture which attaches other parts. Mary repeated several times that, "If it's not right, it's wrong! I check my own work first, then the person who gets it after me checks my work, as well as her own. If it is not right, we have to tell each other."

In addition to this accountability, they constantly work together to get the job done.

Mary said, "If I get finished, I help someone else. Sometimes I get behind and others will come over and trim the resistor wires while I solder them onto the buss bars. It really takes teamwork!"

Before becoming supervisor, Dawn Pease worked with this line when they made 8604s and 8606s prior to the 8607s.



Left to right: Renee Wininger, Joyce Malcolm, President Terry Hammond, Patti Nichols, Trudi Hoover, Dawn Pease, Supervisor, (in back), Carol McQueen, Debbie Brown, Sue Shields, Helen Hill, Karen Harris, Ray Perry (back), Yuriko LaVelle (front), Ed Belonge (back), Nelson Arzandon, Jane Gervais, Mary Chupp, Anne Malone, Sharon Arnold, Coordinator. Front and center: the last of the 8607s.

Trying to put into words what has made this team special, Dawn said, "We always talked about it! Whenever there was a problem or critical need, we discussed what was needed and then did what was necessary to get the product out the door. Everybody was always willing to move on to another position and help, and my job was to keep them moving. There was no blaming. When there was a problem to be remedied we considered training, documentation, processes, jigs or fixtures, or 'just a bad day'. The goal was to catch a defect before the product went out."

As Mary put it, "Personalities clash, but we have learned to put those aside and help each other do good work. We know if we don't do it right, products will fail. We have to tell each other if something is done wrong, and we accept it."

It was a particularly close team in other ways, too. Dawn said, "The people on this line have supported each other through pregnancies and babies, grandmas' show-ers, deaths, divorces and remarriages, sicknesses and accidents. We had just move to a new location in Plant 2A when I had an automobile accident and broke my back. Sharon

Arnold (Coordinator) covered for me for six weeks while I was recuperating. I came back for three weeks and then had to have surgery and was in a cast for six months. Dick Moore also provided great support during that time, doing what he could to help Sharon with production. People on the line brought me dinner every night for two weeks after I had surgery."

Dawn gives credit to Sharon Arnold who has been an able assistant. As coordinator, Sharon keeps the line flowing in Dawn's

absence, sees the products through production and shipping, produces production reports, keeps track of floor stock, receives work orders and issues parts to work orders. While she is doing these things she answers the phone, records attendance information and is able to help on the production line wherever help is needed.

Renee, Joyce and Dawn continue to work on industrial products. The others now work on the 8645s and GRAM units.

"And so our last morning meeting was spent reminiscing and crying," Dawn said. "I read the friendship plaque I presented to them when I first became supervisor to try to bring closure to our time together." ☺

The President's Memo...

"Endings and New Beginnings"

As we near the end of 1995 many of us will spend some time reflecting on the important events in our lives this past year. Certainly the birth of another grandson and granddaughter were major happy events in my life. However, the loss of one of my two younger sisters was a sad event. Like me most of you probably experienced both positive and negative events during 1995.

Most of us will also think about plans for the new year, 1996. This is that time of year for endings, or putting the past behind us, and preparing for the beginnings of the new year. New beginnings can be and should be exciting!

From the perspective of Crown International also, there are both positive and negative events reflected from 1995. We will end the year with record-high sales and employment levels. A major positive contribution of any successful business to its community is that it typically creates more jobs and often higher income for those already employed.

Crown was also blessed with higher profit levels and higher profit-sharing bonuses during 1995 than in 1994. These provided reinvestment capital for the corporation to keep it healthy and growing, and helped raise the standard of living for our employees. The corporate principles were supported with profitable growth and service to people.

A major disappointment in 1995 was the shortfall in our international sales expectations because of economic problems in Mexico and political and economic turmoil in China. We felt the disappointment in failing to achieve our product development and sales objectives in the Satellite Network

Communications and Broadcast business groups. We also failed to achieve some of our internal operational goals in the areas of quality and product delivery performance.

Much as our personal lives, Crown's future is influenced by past successes and failures, but the start of a new year does offer a chance to begin again. For Crown International 1996 looks exciting and challenging. We are again forecasting record sales, record profits and record profit-sharing bonuses. We know the opportunities are there, but we must all work together as an effective team to capitalize on them. As I have said before, "Everyone will win if we are successful!"

With the holiday season upon us, I wish each of you a joyous and meaningful Christmas. I am reminded that Christmas represents a new beginning also and that because God did send His only son to us, He gave each of us the opportunity for a new beginning in our relationship with Him.

In II Corinthians 5:17 we are reminded that "If anyone is in Christ, he is a new creation; the old is gone and the new has come." My personal wish for each of you at this season is that you will know this newness of life that can only come through Jesus Christ.



Terry Hammond

The Crown Crier is published monthly to inform employees of customer, corporate, departmental and employee news and progress. News and ideas are always welcome!

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