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Free Coffee Day!

To celebrate those employees with Birthdays in May (see Birthday Listing on page 3), there will be **free coffee** from the vending machine starting early AM on May 19th through early AM on May 20th. ENJOY!

HAPPY BIRTHDAY TO ALL!

Improvement Idea Winner

By Scott Wagner, Plant Mgr.

Congratulations to **Robert Feldman**, an Electrician in the Maintenance Department, for being the improvement Idea winner for the month of April.



Bob's improvement idea is to install timer switches on the cooling fans used at the cyclone furnaces. When the fans are turned on to cool loads, they are often left running for hours longer than needed. The timers can be set to allow the fans to run for a couple hours and then shut off. This would save electricity and wear and tear. We will also look to do this improvement to other cooling fans throughout the shop.

There were a total of 4 improvement ideas submitted in the month of April. Others submitting improvement ideas were **Sarah Mansuetti**, **Derek McAlarney**, and **Gregory Smith**. Thank you all for letting us know your ideas for improvements here at Rex.

The next Improvement Idea spin will be held on Monday, May 19, at 3:10 PM in the Induction area. Bob will be drawing the name of one lucky employee for the "Monthly Employee Appreciation" spin. Come to the spin to see if it could be you! Then you'd be the one taking a spin on the Rex Wheel of Chance.

Perhaps you have an idea for an improvement here at Rex. Write it down and drop it into the box outside of the Production office door. You might be the next winner and have your turn to take a spin on the Rex Wheel of Chance!

Monthly Winners

By Scott Wagner, Plant Mgr.

Our Improvement Idea winner for the month of March was **Frank Rapine**, a Pyrometry Technician in the Quality Assurance Department. Frank, along with Gregory Smith, Michael Townsend, Tom Felder, Raymond Souder, Brian Wingate, Derek McAlarney, and James Forbes, who also put in improvement ideas in March, received a "Thank You" pin and a \$5 lottery ticket.



Frank Rapine (right) is congratulated by Scott Wagner on being the Improvement Idea winner.

Frank drew a name for the "Monthly Employee Appreciation" reward. That lucky winner was **Sharlrey Dubisette**, a Furnace Operator in the 600 Group. Sharlrey won a reward of \$50 when he took his spin.



Sharlrey Dubisette (right), the Employee Appreciation winner, is congratulated by Scott Wagner, Plant Manager.

Frank drew 5 names from a bucket that contained the names of all Rex employees, and the winners each received a \$5 instant lottery ticket. The 5 lucky winners of lottery tickets were **Nancy Gardner**, **Chris Sholly**, **Nathan Hamilton**, **Monserate "Mike" Santiago**, and **Ron**



Starting from top left across and across at bottom, Raymond Souder, Gregory Smith, Derek McAlarney, James Forbes, and Brian Wingate receive their "Thank You" pin and lottery ticket from Scott Wagner, Plant Manager.

Makos.

Out of all the correct guesses submitted for the **Rex Riddle**, one name was drawn for a \$5 lottery ticket. That winner was **Ray DeHaven**.



Gregory Smith (7 yrs.) receives his anniversary gift from Scott Wagner. Also celebrating an anniversary were Brandon Reynolds (16 yrs.) and Trevor Levonski (1 yr.).

When **Frank** took his spin, he won a reward of \$200.

For refreshments we all enjoyed snacking on an assortment of cookies and free hot drinks from the vending machine.



Nancy Gardner and Nathan Hamilton collect their lottery tickets from Scott Wagner.

Come see if you'll be picked to be the next Monthly Employee Appreciation winner to spin the wheel!

Types of Steel Fractures

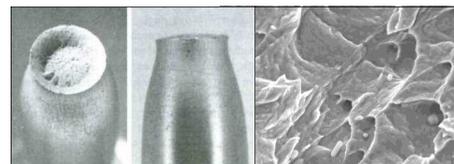
One of the most commonly used metals is steel. When something made out of steel breaks, or fractures, you need to first determine what type of fracture has occurred, so that you can find out how and why the steel fractured. Fractures in steel are described by the fracture mode and the fracture orientation. Even though there are thousands of different kinds of steel, there are only a few types of fractures that occur in steel. The study of the fracture surfaces of materials is known as fractography.

Mode and Orientation

Two key steps in figuring out the type of fracture in steel is to describe the mode and orientation of the fracture. The mode of the fracture describes how the fracture propagates through the steel—ductile, brittle or fatigue. The orientation of the fracture describes the loading conditions on the steel at the time of fracture, such as tension, torsion, bending and shear. A fracture can change mode and orientation as it progresses, so one fracture can include several types of fractures.

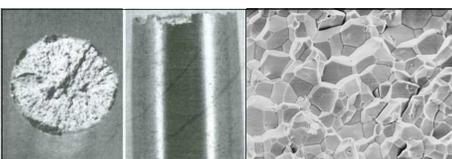
Fracture Modes

Ductile, brittle, and fatigue are the three basic fracture modes in steel. In a ductile failure, the steel experienced overload, which involves flow of the metal and a permanent change in shape of the item known as plastic deformation. In a ductile fracture, the steel surfaces appear dull, and when viewed under a microscope they appear rough and pitted with tiny pits called microvoids.



Ductile Fracture with plastic deformation.

Fracture surface magnified 3500x showing microvoids.

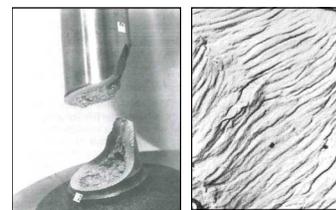


A Brittle Fracture in a tensile specimen.

Fracture surface magnified 990x having a "rock candy" appearance.

In a brittle fracture, there is no permanent plastic deformation and the steel will have a smooth or woody appearance under low magnification. At a higher magnification, the brittle fractures can be either smooth, when the fracture cuts through the metal grains, or they can be faceted like rock candy, when the fracture follows the grain boundaries.

The third mode of fracture in steel is fatigue. This type of fracture can occur when steel is subjected to changing loads or stresses. The surfaces of a fatigue fracture are wavy, looking like the ripples on a sand dune or the ripples in the sand on a beach.



Fatigue fracture due to bending.

Fatigue "sand-like ripples" striations in a fracture surface.

Fracture Orientation

The fracture orientation is the second item of information you need to determine the type of fracture in steel. There are four basic fracture orientations—tension, shear, torsion, and bending. Tensile fractures happen when a piece of steel is pulled directly apart by the load. A shear fracture is caused by a cutting action, like scissors. Torsional fractures occur from twisting, like a screwdriver, and bending failures occur through the bending of the steel.

Type of Fracture

To be able to describe the type of fracture in the steel, you need both the fracture mode and the orientation. An example of a description might be perhaps, "tensile overload" or "bending fatigue." Since there are three basic modes of fracture in steel and four load orientations, there are twelve basic fracture types. And since a single fracture can change mode or orientation, different parts of a single fracture can be of different types.

Did You Know?

Unusual Toys



Playmobil "Playworld" series, "Airport Security Play Set." This set allows kids to reenact the excitement of going through the security line at the airport.

Catholic school flashback! Your worst nightmare is here. This feisty wind up **Nunzilla** spits sparks as she waddles toward you with her ruler of death. No batteries required. All you need is a sense of humor and a love for religious novelty items. Nunzilla wants you!



The Giant Microbes - Computer Virus plush toy is a virus you can handle! This clever toy is made of 1's and 0's and has an attached ribbon that spells its name out in binary code. A computer virus is a piece of digital code that attaches itself to a program to spread across file systems and infect computers. Don't let a real virus infect your computer; get the Giant Microbes - Computer Virus instead!

iPad Potty Training - You need to train your child to use their iPad while pooping at a young age. *Product Details: iPad pooping and potty training for kids.* Adjustable stand securely holds and helps protect iPad while kids play. Clear touchscreen protector guards against smudges and messy hands. Ewww!



Mini Vampire Hunter Set - Don't try to fight big vampires with this one, but smaller ones shall fear you. Miniature vampire hunter set gives you all the tools that keep vampires away from you. How could they possibly dare come after you after seeing all your gadgets?

Yearly Work Anniversaries

The following employees are celebrating their Work Anniversaries in **May**

6 to 10 Years

Ron Makos

Over 10 Years

Tim Plaucher (24)

You will receive your annual gift at the monthly spin.

Happy Birthday

Employees celebrating a birthday in **May** are listed below. Let's wish them a happy day.

9	Michael Evans
18	Sid Heflin
20	Fred Cherezov
22	Bill Attieh



HAPPY MOTHER'S DAY

The Rex Riddle - #34 ?

What kind of coat can be put on only when wet?

To submit your guess for The Rex Riddle, take a slip out of the folder in the rack in the Production Office, fill it out, and drop it in the box outside of the Production Office door. Guesses will be taken until the morning of the monthly spin.

One name will be drawn from all the correct answers to receive a \$5 instant lottery ticket.

Can you figure out the riddle?

Answer to Last Month's Riddle

There are 20 people in an empty, square room. Each person has full sight of the entire room and everyone in it without turning his head or body, or moving in any way (other than the eyes).

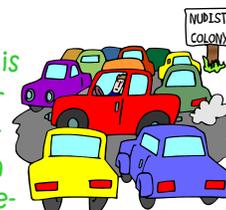
Where can you place an apple so that all but one person can see it?

Answer: Place the apple on one person's head.

A LITTLE HUMOR

A farmer living by a country road is increasingly concerned by speeding traffic. Worried that he and his livestock are in danger, he calls the police and asks them to put up a sign. They put up a "Slow" sign but it has no effect. They try putting up a "Pedestrian Crossing" sign, but that has no effect either. Finally they try erecting a "Children at Play" sign, but the traffic still keeps whizzing past.

Eventually the farmer asks if he can put up his own sign and the police agree. A few days later a policeman stops by to see how things are going. He's amazed to see the traffic moving at a snail's pace, then he notices the farmer's home-made sign by the roadside, it reads, "Nudist Colony."



Hand Tool Safety

www.toolboxtopics.com

Hammers, wrenches, chisels, pliers, screwdrivers, and other hand tools are often underrated as sources of potential danger. Hand tools may look harmless, but they are the cause of many injuries. In fact, an estimated 8 percent of all workplace compensable injuries are caused by incidents associated with hand tools. These injuries can be serious, including loss of fingers or eyesight.



Hand tools can cause many types of injuries:

- Cuts, abrasions, amputations, and punctures. If hand tools are designed to cut or move metal and wood, remember what a single slip can do to fragile human flesh.
- Repetitive motion injuries. Using the same tool in the same way all day long, day after day, can stress human muscles and ligaments. Carpal tunnel syndrome (inflammation of the nerve sheath in the wrist) and injuries to muscles, joints and ligaments are increasingly common if the wrong tool is used, or the right tool is used improperly. Injury from continuous vibration can also cause numbness or poor circulation in hands and arms.
- Eye injuries. Flying chips of wood or metal are a common hazard, often causing needless and permanent blindness.
- Broken bones and bruises. Tools can slip, fall from heights, or even be thrown by careless employees, causing severe injuries. A hammer that falls from a ladder is a lethal weapon.

To avoid such injuries, remember the following safety procedures:

- Use the right tool for the job. Don't use your wrench as a hammer. Don't use a screwdriver as a chisel, etc. Go back to the tool house and get the right tool in the right size for the job.
- Don't use broken or damaged tools, dull cutting tools, or screwdrivers with worn tips.
- Cut in a direction away from your body.
- Make sure your grip and footing are secure when using large tools.
- Carry tools securely in a tool belt or box. Don't carry tools up ladders. Use a hoist or rope.
- Keep close track of tools when working at heights. A falling tool can kill a co-worker.
- Pass a tool to another person by the handle; never toss it to them.
- Use the right personal protective equipment (PPE) for the job. Follow company instructions for selecting and using safety eyewear, steel toed shoes, gloves, hard hats, etc.
- Never carry sharp or pointed tools such as a screwdriver in your pocket.
- Select ergonomic tools for your work task when movements are repetitive and forceful.
- Be on the lookout for signs of repetitive stress. Early detection might prevent a serious injury.
- Always keep your tools in top condition. A dull blade or blunt point can lead to injury.
- Store tools properly when you stop work.

By following these precautions, you can help prevent injuries and provide a better workplace for everyone. Remember, an ounce of prevention is worth a pound of cure!



"THE NAVIGATORS"



Have you heard of us yet? If not, I would like to introduce an old team here at Rex Heat Treat called "The Navigators". This team is comprised of both Union and Management employees who come together to hash out ideas of ways to make your employment experience here at Rex Heat Treat more enjoyable.

We need your help. We are currently looking for a NEW NAME. Our team has submitted a few ideas. We would like more choices to choose from when we vote for a name that best describes our mission. The one who comes up with the winning entry will win a Lottery Ticket presented at the next employee appreciate spin.

Your Suggestion doesn't have to incorporate the company name, but it does have to correlate with this team's mission. Suggestion slips can be found in the HR file box located in the Supervisor's office. Thanks in advance for your help!

Our team is working on the first event of 2014, an old-fashioned COOK-OUT to be held right here at Rex Heat Treat beginning at Noon on Friday, June 6th. Information and reminder will be posted on the Bulletin Board the week of the event. Leave your lunch box at home and bring your appetite on that day.