The following Good Safety Practices were developed from the Innovation in Safety Award submittals.

2023 Reports

Mobile Equipment / Pedestrian Safety Barriers
Boise Cascade Chapman

Facetime Conversations
Boise Wood Products Havana

CSC Meeting Structure Improvement
Boise Cascade Homedale

Hazard Tracking System
Boise Cascade Homedale

Face Time Conversations (FTC)
Boise Cascade Thorsby EWP

Screened Windshield for Forklift
Boise Cascade White City EWP

Slip Trip Fall Preventative Intervention
LP – Two Harbors

Automatic Hot Press Panel Feeders
PotlatchDeltic Corporation St. Maries Plywood Complex

Dust Mitigation
Roseburg Forest Products Chester Engineered Wood

Pedestrian Skywalk
Roseburg Forest Products – Coquille Plywood

Process Playbooks
Roseburg Forest Products – Coquille Plywood

The IBiZ NOW Safety Show
RoyOMartin

Lock Ring Upgrade
RoyOMartin - Oakdale

QR Code Mobile Equipment Inspections
West Fraser – Joanna

Improved Warehouse Layout/Flow
Weyerhaeuser – Arcadia OSB

Safety Enhancements – Changing Thermal Oil Hoses
Weyerhaeuser – Elkin Panels

Wax Cleanout Steam Reduction
Weyerhaeuser – Grayling

Gearbox Cooling Equipment
Weyerhaeuser – Sutton

Chipper Projectile Elimination
Winston Plywood & Veneer

Mobile Equipment / Pedestrian Safety Barriers

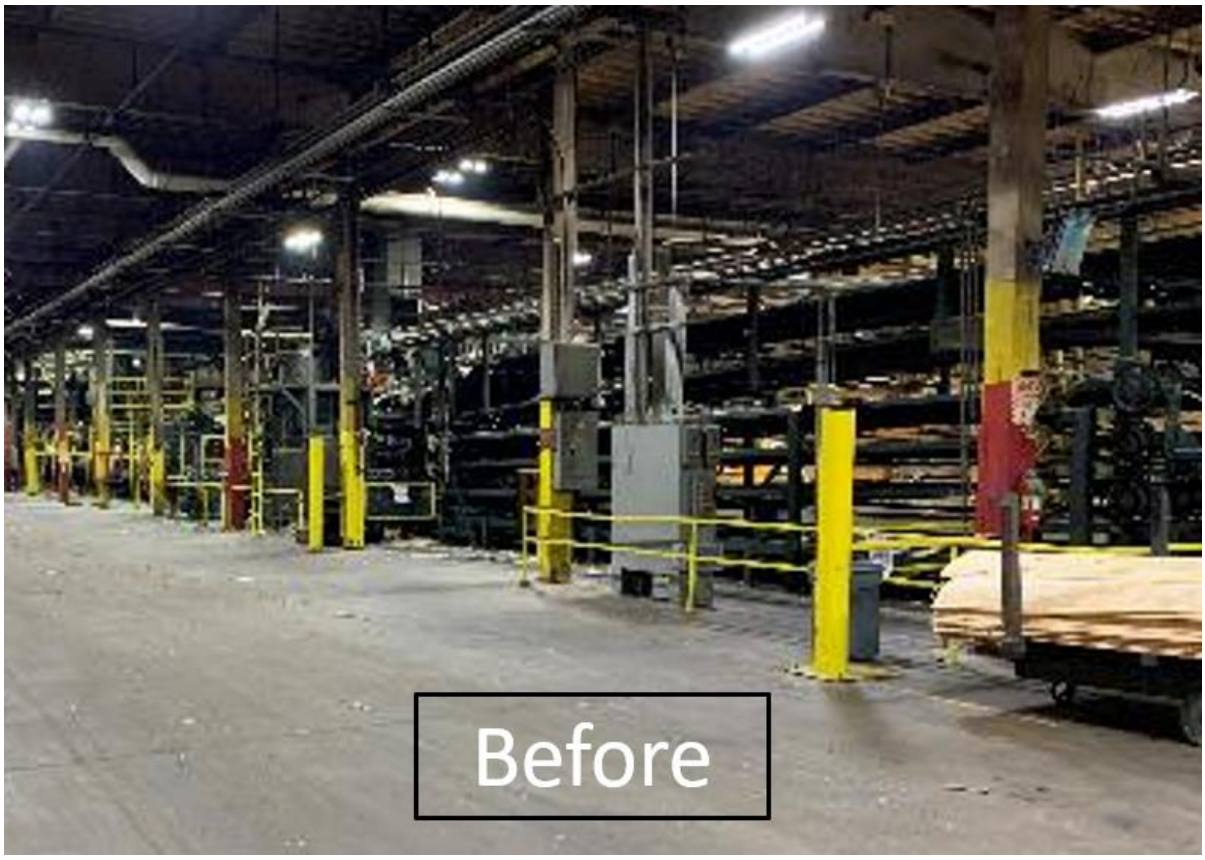
Boise Cascade Chapman

Contact: Tim Stewart / Senior Safety Coordinator
Email: TimStewart@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   In March of 2023, the Chapman facility participated in a MOPED (Mobile Operation and Pedestrian) safety assessment to review our mobile equipment operation around pedestrians. The assessment revealed numerous opportunities to create barriers to separate pedestrian traffic from mobile equipment operation and to clearly define pedestrian walking paths. Instead of scrapping used, old rollers from the Dryers, our millwrights re-purposed the rollers and fabricated guard rails to protect our Team Members. The fabricated guard rails were installed throughout the mill and painted yellow.


After


Before

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The process started as a region-wide initiative to improve safety around pedestrians and mobile equipment. By using a risk ranking system based on frequency, severity, and probability, we determined where our high-risk areas were located and immediately focused our attention there. The safety coordinator met with Team Members during the planning stages for feedback and to assist in reviewing the proposed location where barriers were to be installed. The Team Member's feedback helped ensure we were not creating a more difficult area to navigate around workstations and creating a new hazard. Proactive communication with the maintenance superintendent ensured barriers were installed promptly and in the correct locations. After the installation of the barriers, supervisors held pre-shift meetings with their departments to cover the new barriers and explain the expectations of Team Members to use the new walking paths.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Before the installation of the barriers, the pedestrian walking paths were not clearly defined and posed a high risk of struck-by hazards with mobile equipment. The installation of the barriers has produced an extreme reduction in the risk of pedestrians being struck by mobile equipment. Team Members have communicated that they feel safer walking through the mill and are encouraged to see the safety improvements. The Chapman facility was able to improve the critical elements rating of our MOPED assessment from 71% to 81% and successfully reduced seven (7) considered "High-Risk" areas to "Low-Risk" areas by installing the new protective barriers. For 2023, there were no near misses reported that involved pedestrians and mobile equipment where barriers were installed.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   Implementation of the project began in March 2023 and resulted in immediate positive results by reducing the risk of struck-by hazards. By recycling the used dryer rollers, our millwrights were able to save the company more than seventy-five thousand dollars by not having to purchase new material to create the barriers.

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Facetime Conversations

Boise Wood Products – Havana Operations

Contact: Lee Pauli, Safety Coordinator
Email: LeePauli@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Our facility was looking for a solution to get more out of its safety auditing system. Over the course of 2023, we had a total of 1694 observations of unsafe acts or unsafe conditions reported by our leadership team. We used this data collected to correct unsafe conditions, correct unsafe behaviors, and identify focus areas for training and procedural changes. We felt that there was more to be gained from the time and energy invested in the recognition and documentation of these hazards. We asked our team to utilize each hazard they identified as a coaching opportunity.

   If they stopped an employee from performing an unsafe act, it wasn't enough to just stop them and tell them it was unsafe. They used the opportunity to discuss with them why it was unsafe and what could potentially happen to them as well as how to perform the activity in a safe manner.

   If they observed an unsafe condition, it wasn't enough to just mitigate the hazard and put in a work order in the system to have the hazard corrected. They would have a team member or two from the area come over to see the hazard to help them identify hazards themselves.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   Our facility had a large percentage of its team members with a tenure of less than ninety days. With that in mind we felt that consistent coaching of safe behavior and expectations would greatly enhance our safety culture. Leadership was trained to recognize and intervene whenever an unsafe act or condition presented itself. They were tasked with having a discussion with one or more team members every time a hazard was observed.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Over the course of 2023, 81% or 1372 hazards observed, resulting in face time communication between leadership and team members. This proactive approach led to 56 Face-Time conversations to each injury incurred. This greatly enhanced team members knowledge, lowered their risk tolerance level, and reassured them that their leadership team cared about their safety.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   This innovation was implemented January 1st, 2023. Implementation of this innovation aided in our facility recording the lowest All Incident Rate of 14 like facilities within the WP Division. It also helped team members understand hazard recognition and aided them in correcting unsafe behaviors of fellow team members through the Power of **1,372 Face- Time Conversations #becausewecare.**

Face-Time Conversations #becausewecare

Face-Time, *We have Conversations with Team members to help prevent an injury or incident from occurring; by focusing on the situation, as we speak about what we observed, and why we have concerns for their safety.*

#becausewecare, *We have Conversations on unsafe acts to help with:*

- *Instructional knowledge on "Knowing What To Do"*
- *Motivation on "Doing What You know is Safe To Do."*

#becausewecare, We have Conversations on unsafe conditions to *help Team Members Identify Hazards and reduce Risk Tolerance.*

Origami Leading Incidents

Boise Cascade

Teaching Hazard Recognition

	UnSafe Conditions: -FaceTime Conversations
1	Will put work order in to repair and will flag area off until fixed. Explained the hazards to feeder in area.
2	Had utility unrack the hose and close the valve off tighter and rerack the fire hose and had a conversation with him about rolling fire hoses up and checking to make sure the valve is off all the way so this doesn't happen.
3	Picked up star gears and other parts and placed on the cart that had more parts on it and moved it to the side out of the way. Had a conversation with Mr. Bass about reporting and cleaning things like this up as soon as possible. Mr. Bass reported it to me and we got it picked uip.
4	Got veneer loader to fix and explained the hazards to him.

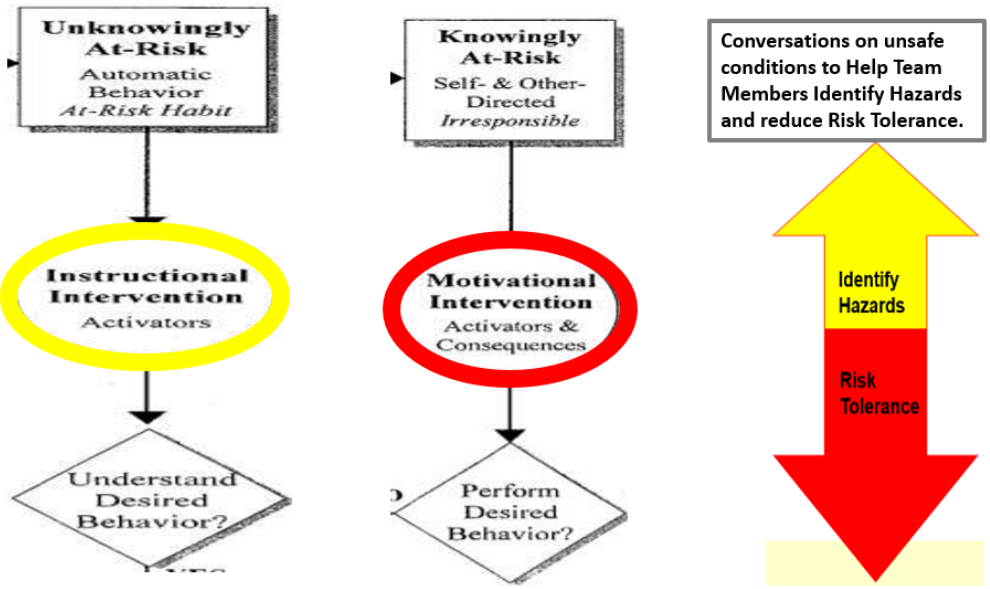
Boise Cascade

Coaching on Risk Tolerance

	UnSafe Acts: -FaceTime Conversations
1	I stopped the employee and counseled him about slowing down when driving behind someone even after blowing his horn. I had a conversation with him just because he blows his horn doesn't mean you continue on in the direction you are going at full speed. If I had not heard his horn and stepped back he could have ran over me.
2	I had a conversation with the operator about the hazards of having a full buggy and that he needs to notify someone when it's starting to fill. I also had a conversation with forklift drivers that this is something they should look out for.
3	Stopped employee and explained the hazards to him.
4	Stopped employee and explained to him the hazards.
5	I stopped him and had a conversation of the hazards of feeding dry veneer to quickly, I also explained to him how this can affect the layup line if to much wood is fed onto the belts and the hog plugs.

Boise Cascade

FaceTime #becausewecare



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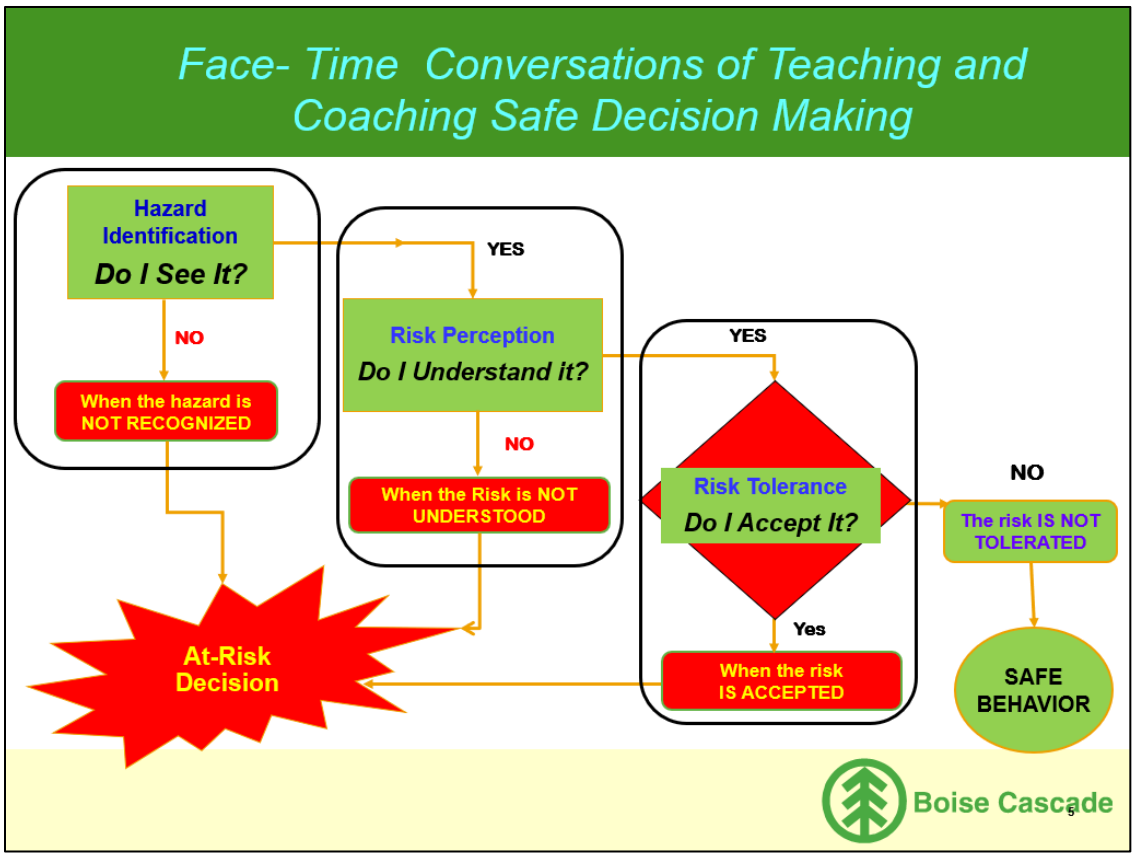

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CSC Meeting Structure Improvement

Boise Cascade Homedale

Contact: Antonia Vasquez, Safety Coordinator
Email: antoniavasquez@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   To improve safety awareness, the safety committee decided to make changes to the way they presented their meetings. They wanted to keep attendees engaged and to clearly present information in a way that everyone will understand.

   First, the CSC core members met a week prior to every monthly meeting. This would give them enough time to complete any action items and review any information they needed to clearly report on. The Plant Manager, Safety Coordinator, and Maintenance Supervisor also met monthly before the CSC meeting to review any open work orders; these would be one of the tools shared with the CSC to share with the entire mill. Our Human Resources would also provide the CSC with any upcoming events or changes.

   The meeting would begin with a picture or video to draw everyone's attention. On this first slide, CSC used pictures from the previous month's safety events, safety videos, and sometimes even funny safety memes. Changing the picture/video every month worked best for the CSC, it would get everyone talking and in the mood.

   Next, they had their New Hire Introduction slide. The new hires were given a chance to introduce themselves and to give feedback on the New Hire Mentorship Program.

   The CSC improved safety awareness in their meetings by discussing the following information; key learnings from an incident at a different location, key learnings from one of our location incident investigations, review of all previous months incidents, review of active Hazard IDs, review of all open safety work orders, All in one participation updates, safety action plan updates, weekly safety topic, Safety Challenge announcements, safety events announcements, weather awareness and preparedness, and at times the presentation would end with a video or picture of our finished product installed in buildings, to show attendees to take pride on their work.

   The Safety Coordinator and CSC president facilitate the meetings, the core members report out on their sub team action items, and human resources announce events. Having different associates present the information gives the audience more confidence in sharing their thoughts. After every topic all associates are encouraged to give feedback or ask questions.

   At the end of the meeting, the slides are printed and added in our communication binders. They are also distributed to all management team via email. The following day the CSC members share the meeting information with their departments during their pre shift meeting.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   In January of 2023, the CSC core members had a meeting in which they reviewed the safety improvements in 2022 and the safety goals for 2023. They found that safety awareness could be improved by strengthening our safety communication in our CSC meetings. All associates are invited to attend these meetings or to review the minute meetings in our communication binder.

   The CSC members decided to improve the structure of the monthly meetings. Every member contributed to this innovation by bringing feedback from their departments. They went and asked hourly associates what was stopping them from attending CSC meetings, and what would interest them to see in the meetings. The CSC also asked the management team to provide them with different data that they could share in their meetings.

   Once the CSC had all the information they needed, they were able to put together a well-structured presentation.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   The improved CSC meeting structure increased attendance and maintained attendees engaged. The topics discussed have enhance our safety program. Receiving feedback from new hires has helped us improve our mentorship program. Sharing key learning from major incidents from other locations has brought safety awareness to our associates. Giving updates on active Hazard IDs and sharing the open work orders have encouraged the associates to continue to report all unsafe conditions.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The CSC core members wanted to make an impact during their CSC meetings, so they decided to make changes to their presentation starting on 2023 February CSC meeting. We were able to see the results immediately during this meeting. Attendees were more attentive and participated in safety discussions. In the past we had noticed that our communication binders always remained untouched, after this meeting we noticed associates interested in reviewing the slides to the meeting presentation. We have also seen an increase in attendance and on requests to attend.

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Hazard Tracking System

Boise Cascade Homedale

Contact: Antonia Vasquez, Safety Coordinator
Email: antoniavasquez@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   In 2023 the Homedale Central Safety Committee "CSC" realized associates were reporting Hazard Identifications and the tracking system in use was not accurately capturing all the reports. Our hourly CSC members also reported that associates were feeling discouraged about writing Hazard ID cards because they were not receiving follow-up and/or did not understand the process. The CSC and Plant Leadership Team, consisting of Supervisors, Hourly Leads, Safety Coordinator, and the CSC President worked together to develop a robust tracking process with multiple layers of redundancy and a focus on sustainability that bridges personnel turnover in key roles.

   All Hazard ID's are reviewed in the morning meetings daily with the Plant Leadership Team, (Supervisor group, Hourly Leads, and the CSC President). One area of opportunity identified was, historically a Hazard ID was given to the Supervisor, Lead, or Maintenance team to correct and to follow up with the associates which did not occur 100% of the time.

   In February, we began to ensure that all Hazard IDs that were not able to be addressed immediately were entered into the Maximo maintenance scheduling system and they were also entered into the Origami safety data management system. To add a layer of redundancy to this process a recurring monthly meeting was created for the Plant Manager, Safety Coordinator, and Maintenance Supervisor to review all open Safety Work Orders, and active Hazard ID's in Origami to update completion dates. The team created an automatic Work Order each month for the team to review the physical Hazard ID cards, Origami entries, and Maximo Service Requests. We believe this process gives us the most redundancy and sustainability to ensure all Hazard ID's are addressed and none have the opportunity to "slip through the cracks".

   The CSC came up with the idea of adding the progress of work orders in our CSC meetings to share with the entire mill. One agenda item on all CSC meetings is to review all Hazard ID's with their status since the prior meeting. This opens up an additional channel of communication between the Plant Leadership team and CSC with the entire mill on all Hazard ID's and their status.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The CSC team discussed the need for a better tracking system for Hazard IDs. The Plant Leadership Team began by identifying all known ways Hazard ID's had potential to slip through the cracks. Each one of these became an action item to build a process with redundancy and sustainability that would not allow the failure to occur.

   Next the team looked at resources available to track Hazard IDs. To better leverage the full potential of each of these resources the team contact subject matter experts for training and customization of dashboards within the electronic resource available to us, Maximo and Origami.

   The CSC President wanted to leverage CSC Meetings as a conduit of information to the entire plant to share Work Orders in addition to the Hazard ID's.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   When looking at Hazard ID data prior to 2023, Homedale has failed to track and complete 100% of reported hazards. Since the implementation of the current process, the rate of tracking and completion of Hazard ID's has been 100%. Associates working on the production floor are vital for Hazard Identification at our location. They are the experts on the tasks they perform and the tools, equipment, and materials they use. Creating a program that they can trust and in which they can see the safety improvements motivates them to continue to participate.

   The participation of all associates in identification and the elimination of hazards at our location was a key driver in 2023 being a recordable free year.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   By March of 2023, we had completed our innovative solution to the weak Hazard Identification program we had. The results were immediately evident when we started to see a decrease on repetitive hazard ID's. We noticed an increased participation in our March Safety meeting when discussing Hazard ID and an increase in quality Hazard Identification cards.

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Face Time Conversations (FTC)

Boise Cascade Thorsby EWP

Contact: Ronnie Morris, Safety Coordinator
Email: Ronniemorris@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Face Time Conversations. We believe engaging in face-to-face conversations with employees helps build employee relations, in return it can close gaps in safety performance. This is especially true for new associates and those that need intervention for unsafe behaviors. We encourage all associates to be actively engaged in reporting leading indicators and intervening with peers when unsafe behaviors are observed. Following up with an FTC for all leading indicator reports creates opportunities to teach safety. At the end of the day our employees are the most valuable resource, they keep the mill running. Leadership must be engaged in teaching safety, quality, and production, in that order. Our Leadership team works to provide opportunities for associates to be successful, grow knowledge and hopefully set the stage for future leaders. By using Face time conversations, it allows the supervisor to have discussions with the associate on a range of different topics.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The idea of Face time Conversations started when we took a hard look at incident reports. We notice a lack of follow-up actions that would help prevent future events. If supervisors are correcting hazards IDs themselves and not following up with associates it doesn't address the root cause in most cases. By having face to face conversations about the risk or safety hazards it gives the leader an opportunity to teach safety and encourage associates to get more involved in preventing unsafe actions and unsafe conditions. We implemented the concept of FTC (face time conversations) to our leadership team and encouraged them to use it as often as possible.

   The idea of Face time Conversations started when we took a hard look at incident reports. We notice a lack of follow-up actions that would help prevent future events. If supervisors are correcting hazards IDs themselves and not following up with associates it doesn't address the root cause in most cases. By having face to face conversations about the risk or safety hazards it gives the leader an opportunity to teach safety and encourage associates to get more involved in preventing unsafe actions and unsafe conditions. We implemented the concept of FTC (face time conversations) to our leadership team and encouraged them to use it as often as possible.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Incident reports with face-to-face conversations have increased. At the end of the day, we do this with one goal in mind and that's preventing serious injuries at Thorsby. Our Vision statement is "I will watch out for myself and intervene with others." We have noticed an improvement in safety awareness, our leading indicators have more value when safety conversations take place. Supervisors are using FTC even when there is no specific hazard to discuss. They spend time on the floor teaching and discussing safety.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   We started implementing FTC in June of 2023. The results were seen over the 3rd and 4th quarters. We saw increases in leading indicator reports that had an FTC listed as part of the corrective actions.

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Screened Windshield for Forklift

Boise Cascade – White City Engineered Wood Products

Contact: Herman Le Bleu – Plant Manager
Email: HermanLeBleu@bc.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Units of plywood panels are separated in stacks by 2X4 “stickers.” These stickers provide space for forklift drivers to access units to lift and move. Because of the height of the stacks, there are times when a unit must have stickers placed on top and then the unit is lifted and placed on a stack. Nearly every year we see reports across the Boise Cascade Wood Products Division where these 2X4 stickers slide off units and hit forklift operators causing injury to their fingers or the upper torso. In fact, while the occurrence of falling stickers is low and the causes are varied, there have been seven incidents in our Western Oregon Region over the last two years with one of them being a finger fracture event.

   Since there are no viable solutions for sticker placement, the White City Engineered Wood Products team sought solutions to control this hazard to drivers. The best solution was determined to be a barrier (metal screen) that could be installed on the forklifts that do not have windshield options. In certain circumstances, windshields are not a suitable barrier due to heat, visual reflections, etc. The team found a fabricator (there weren't any aftermarket solutions available) to make a safety screen for the windshield section of our forklifts that would protect the operator from 2X4 sticker injury risk and still allow good visibility and airflow. It was important for there to be a screen barrier instead of a windshield to assure airflow to the operators in the hot summer months. We were able to have a mesh safety screen built to our specifications. We successfully trialed it in our mill and saw acceptance of it by our forklift drivers. We are now outfitting our remaining forklifts.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

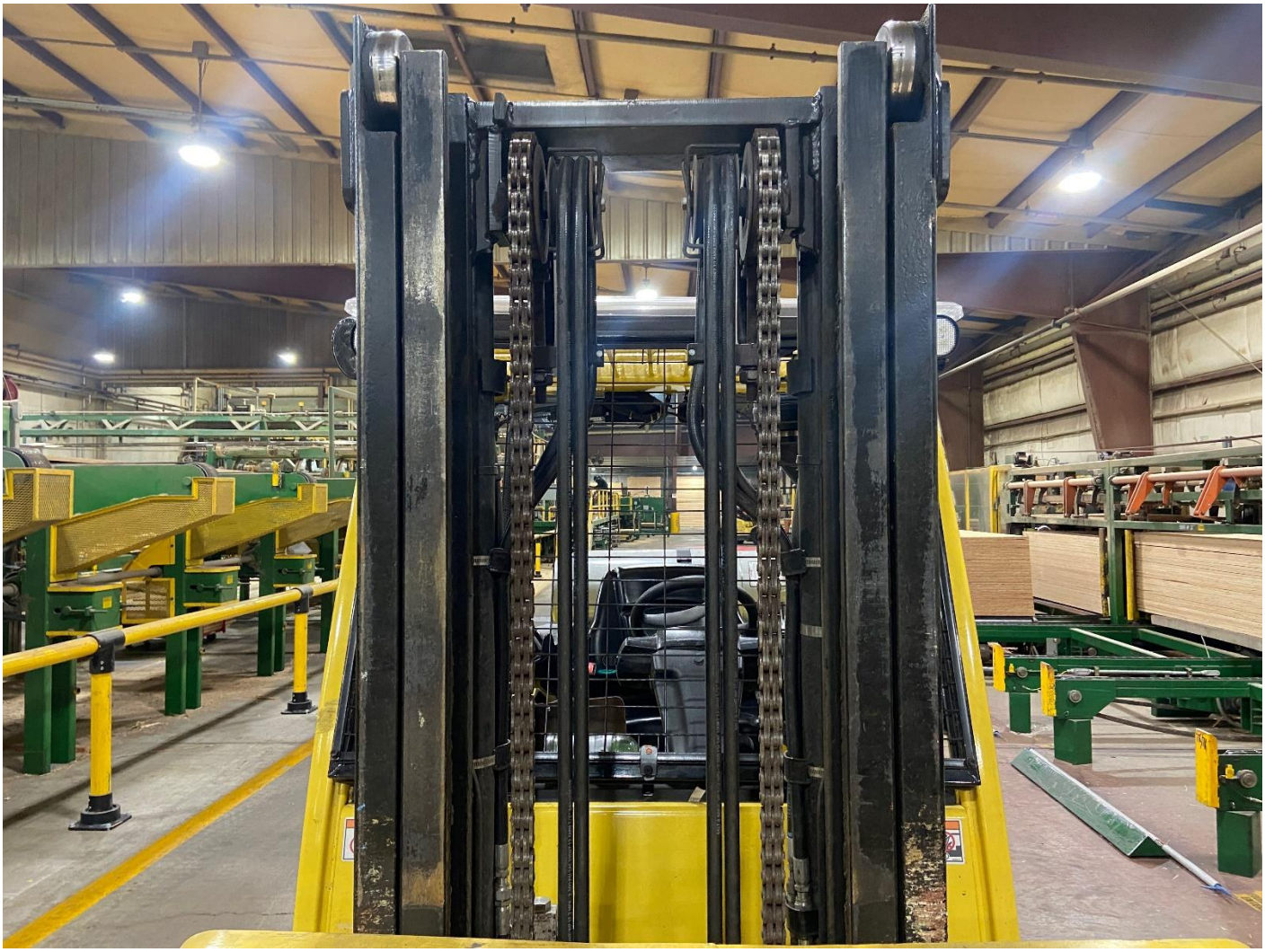
   The plant manager asked the supervisory team and safety committee to develop a solution. The idea of the screened windshield was first thought up by the General Operations Supervisor, David Jordan. He collaborated with associates which led to communication with a local fabricator who took on the challenge to mockup a safety screen for testing. The fabricator then sent a prototype to trial in the plant. We installed it on our most used lift to give it rigorous testing and get operational feedback from one of our best drivers. While drivers were initially resistant to the addition of the screen, they welcomed the installation when fully understanding the safety factors it would provide.

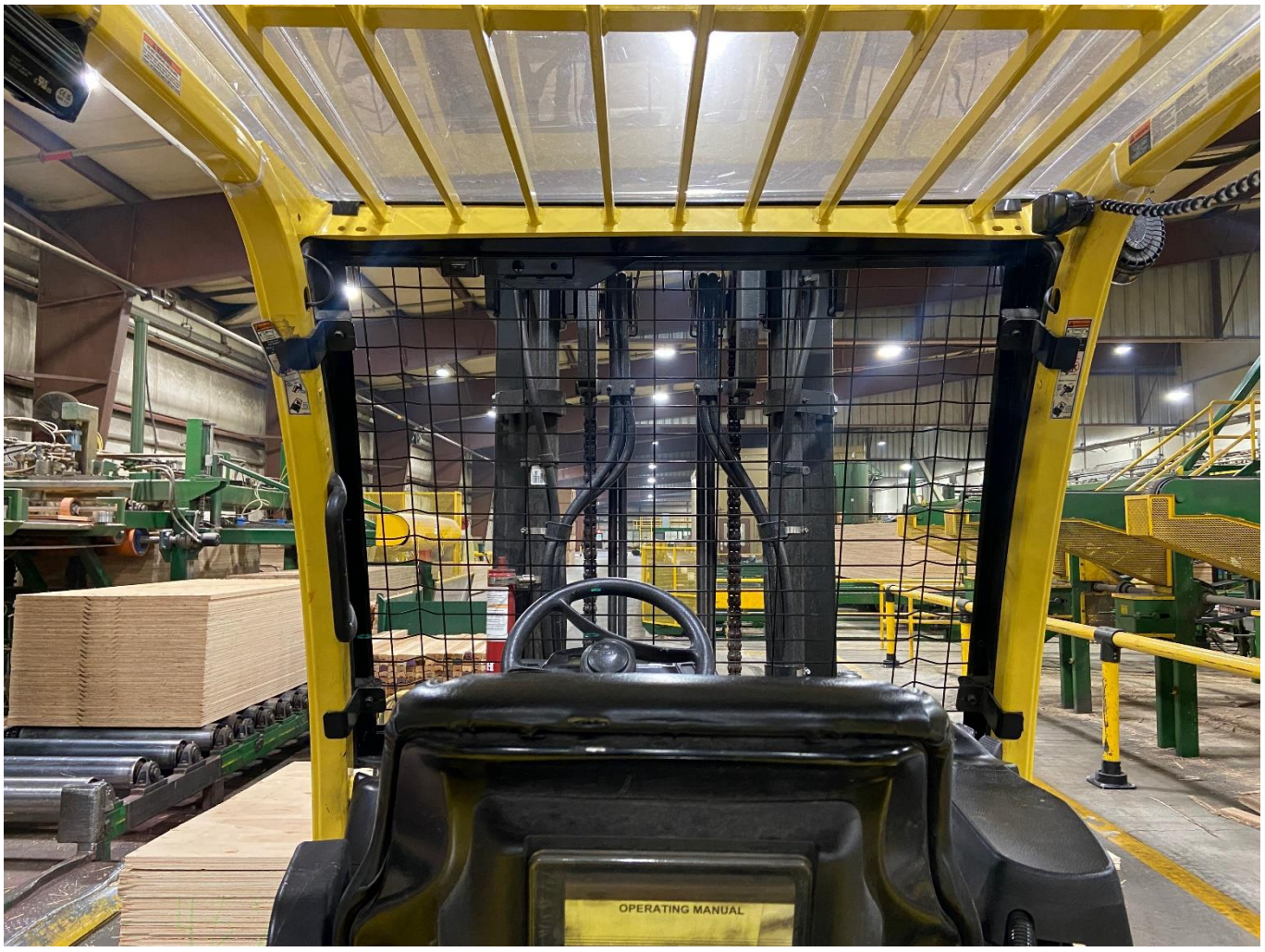
3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. (Provide supporting facts/data, where available).

   We truly believe that this is a valuable innovation for safety since there were no known off-the-shelf solutions fitting our needs. Following installation, the screen is able to deflect falling 2X4 stickers when they occur. As noted, it does not occur often, but when it did prior to the screen, injuries occurred. Now, there are no injuries or near misses when stickers happen to slide off units of panels as the stickers now hit the screen and fall harmlessly aside instead of striking the operator. We have also added the screen to the other 2 of our most used forklifts in the plant. It’s important to add that the visibility change made with the addition of the screens has not caused any driving incidents related to visibility.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

The screen was first installed and trialed in September of 2023. Remainders were installed following the successful testing. The results were immediate. The installation of the screens created an immediate barrier to falling stickers. As noted, the falling stickers were few, but a hazard nonetheless – it was worth going after to control. This screen barrier has proven to be an immediate functional control.

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Slip Trip Fall Preventative Intervention

LP – Two Harbors, MN

Contact: Zachary Trieschman, Safety Manager
Email: Zachary.trieschman@lpcorp.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   After the winter of 2023 where we received a record amount of snow. Our employees were constantly performing snow and ice removal from our North entry door and our front main entry sidewalk. This involved de-icing procedures nearly every day to prevent slips and potential falls. This posed an ergonomic risk to our team members and created an icy and somewhat treacherous surface at both entrances despite our best efforts of salt and grit application. The freeze and thaw effect essentially created a skating rink. After some discussion it was determined that heated sidewalks could potentially be an innovative solution to our problem. We were looking for other businesses in our area currently utilizing this, but we couldn't find any. Our mill is in northern MN so we were a bit skeptical if it would work. After discussions with contractors, we decided to give it a try and we began the process of tearing up the old concrete and prepping for the new heated sidewalks. Our hope was to reduce the potential for a serious injury due to a fall and prevent the need for constant snow and ice removal on these sidewalk surfaces.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   This innovation was developed through discussions with crew members, managers, and contractors to come up with an innovative solution to a potentially serious slip hazard at our front entry walking surfaces. Once the decision was made to implement this system, contracts were awarded, and the process began. Communication about the project was conducted during our monthly crew meetings and employees had an opportunity to ask questions around the improvement.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   The heated sidewalk has been awesome! Our employees are no longer exposed to icy conditions on the main sidewalk and North entry door. Snow and Ice removal activities are no longer a factor which has practically eliminated the potential for ergonomic related injuries as well. The freeze thaw effect has been eliminated and our main entry walk paths have remained dry and ice free this entire winter. This improvement is a demonstration of putting our heads together as a team, identifying a hazard and finding an innovative and effective solution to a hazardous situation. I want to point out that our current system for identifying hazards is through our system of "hazard identification cards". It was through this system that the issue was brought forth, discussed and an innovative solution was brought forth and implemented. All the credit goes to our team members and their safety awareness regarding hazard assessment and identification.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   This was implemented in October of 2023. The positive impact from this improvement was noticed immediately. Our sidewalk is now dry and ice-free year-round, and the potential slip hazard has been eliminated completely. It has been well received by our employees and is a testimony to the power of working as a team to solve a potentially hazardous situation collaboratively.


Louisiana Pacific
NO GUNS ON THESE PREMISES
FOAMULAR


CAUTION
CAUTION
CAUTIO

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Automatic Hot Press Panel Feeders

PotlatchDeltic Corporation – St. Maries Plywood Complex

Contact: Christy Beach, Safety Technician
Email: Christy.beach@potlatchdeltic.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment- based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   A group of maintenance team members got together and designed “Automatic Panel Feeders” for feeding panels into the hot press chargers. The St. Maries Complex has 2 hot presses feeding upwards of 9,000 panels manually per day weighing between 20-60lbs. Each panel had to be manually fed one at a time by an operator into the vertical presses causing repetitious arm/shoulder fatigue.

   The panel feeder was designed to automatically feed each of the 9,000 panels daily into the charger tray one at a time by pushing a remote-control button run by the operators. Operators now only monitor that the panels are fed into the charger trays properly and no longer are manually pushing or handling panels.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   This innovation was developed by our in-house maintenance lead and fabrication team on site. Millwrights met to design and build the panel feeders with operators and the design was highly applauded by all hot press operators on our site upon the first prototype being installed. We then continued to build another feeder for the second press we have on site and have been running these with reliability and reduction in safety incidents/risk over the years.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   By implementing this innovation, it has reduced the risk of injury by significantly reducing the manual and repetitive labor on the employees. The panel feeders have eliminated the employees from having to feed each panel by hand and we run panels with weights upwards of 60lbs (a panel). This also has reduced the risk of pinched hands, fingers, back/shoulder strains, and plug-ups on the in feeds of the presses.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The Panel Feeders were installed a few years ago and have proven to be successful since. We have had several vendors, other mill visitors intrigued and looking to replicate our system due to its simplistic design, reliable operation, and reduction in downfall from manually tearing faces/corner feeding panels the traditional way in a horizontal press. There have been no incident reports on feeding presses since the panel feeders were installed. Prior to this we had a few shoulder and arm injuries.

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Dust Mitigation

Roseburg Forest Products – Chester Engineered Wood

Contact: Anna Miller, Safety Manager
Email: Anna.miller@rfpco.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of four different pictures of the safety innovation).

   CEW installed dust collection socks on the layup line vacuum ducts to reduce fugitive dust from gathering in hard to clean areas. The socks route the dust collection to an easy reach area. They are high enough off the ground to slide a collection hopper underneath and are designed with a zippered bottom to open and dump any dust generated in the process.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   Our site decided to do this to reduce potential combustible dust as a part of our dust hazard analysis focus in 2023. It was discussed between our maintenance, production, and safety team and determined to be the most efficient route to reduce our dust risk.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

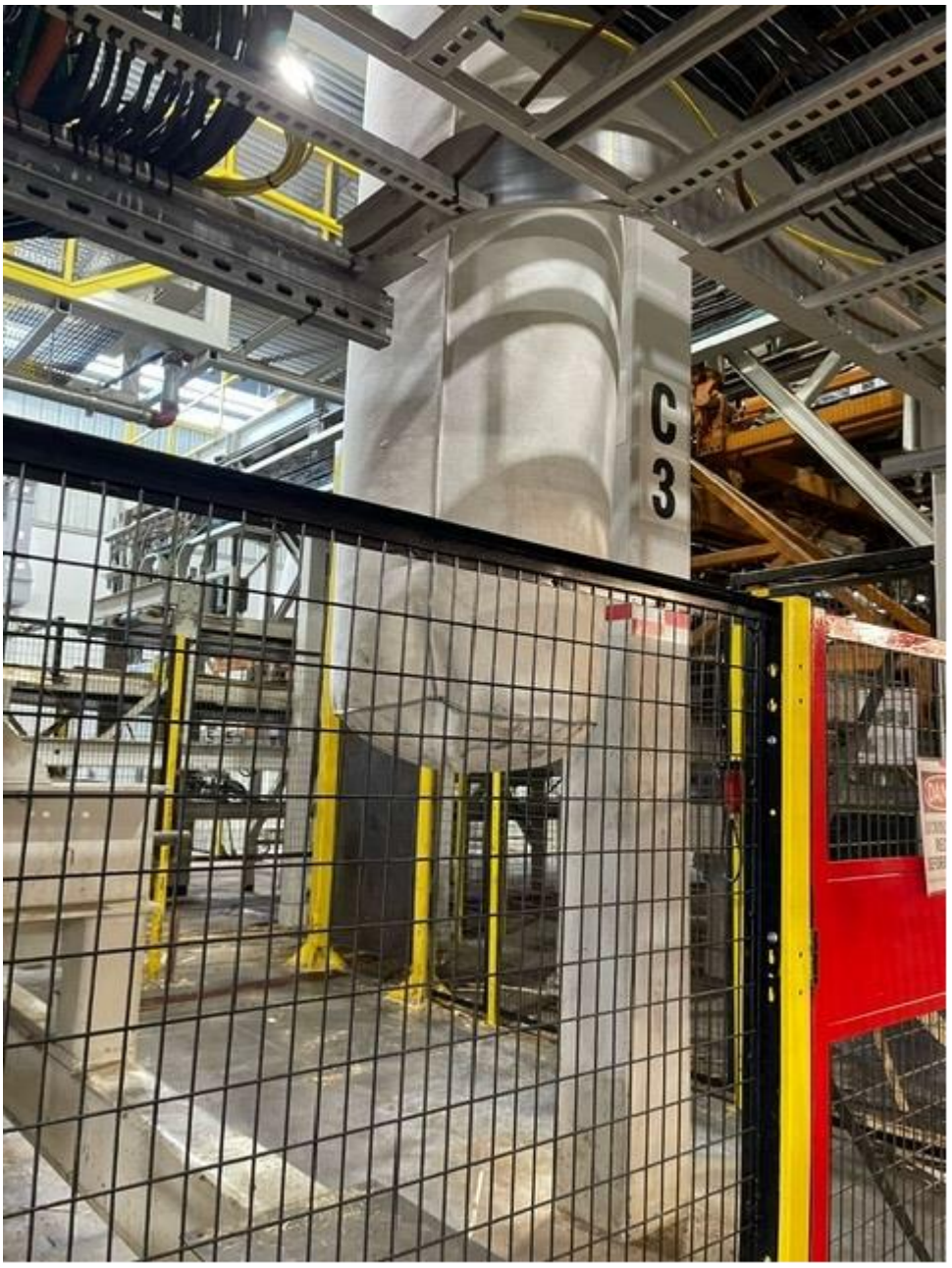
   Implementing the dust socks has reduced fugitive dust in the layup area, thus reducing potential for the dust particulates to get into team member's eyes and reduced the opportunity for wood dust to build up on the top of equipment or rafters which reduces our combustible dust hazard.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The dust socks were installed in December 2023. So far, the housekeeping need in the area has been minimized.

Layup Line #2 Collection Sock

Layup Line #2 Blower and Sock Connection Point



Layup Line #1 Collection Sock Base Height

Layup Line #1 Blower/Sock Connection Point

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Pedestrian Skywalk

Roseburg Forest Products – Coquille Plywood

Contact: Benjamin Nelson, Safety Professional
Email: BenjaminN@rfpco.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   The innovation we are submitting is a pedestrian walkway through our warehouse going to our new chemical storage area on the West side of the facility. The “Skywalk” will keep workers, maintenance, pedestrians, visitors, and vendors safe while walking to and from the glue kitchen and the new chemical storage area. This new walkway is roughly 18’ off the ground and eliminates any pedestrian / mobile equipment interaction for anyone walking back and forth from the glue kitchen area, the new storage area, and the West side of the facility. Other team members who just want to access other storage areas or work on anything on the West side of the facility can utilize this walkway to keep themselves safe from any mobile equipment interaction. Additionally, by the end of the year we will have a fire hose / extinguisher training area on the West side of the mill and will be utilized for each new hire class and all our annual refresher training on that topic. This will be a lot of pedestrian traffic in the future that will be kept safe from the installation of the “Skywalk”.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   During the engineering phases of all our current construction projects, the “Skybridge” was developed when the location of the new chemical storage area was finalized. There were many departments / team members involved in the creation of this innovation. Discussions were had about who would need to access the new storage area and the West side of the facility along with the frequency of that access. With the success of this innovation at our facility we are investigating other possible locations here at Coquille where additional “Skybridges” could be utilized.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   We all know that the best way to protect workers from any hazard would be to just eliminate the hazard completely. With this new “Skywalk”, that’s just what we have done for anyone wanting to access the west side of the facility from the glue kitchen area. (Near the middle of the building) This innovation allows our team members, visitors, vendors, etc. to safely transition through the warehouse storage area to the West side of the facility in a safe way that eliminates the hazards of any mobile equipment / pedestrian interaction. The use of this “Skywalk” will only increase in the near future when the new fire hose/extinguisher training area is completed.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The ”Skywalk” was installed in March of 2023 and the positive results were immediately felt by everyone walking between the glue kitchen and the West side of the facility. Also, it made it much safer for contractors working in our facility during the current construction projects. Some of the contractor companies currently working at the facility would park on the West side of the facility or be working on projects inside and outside where they would utilize the “Skywalk” multiple times a day to protect themselves from any potential mobile equipment interactions.

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Process Playbooks

Roseburg Forest Products – Coquille Plywood

Contact: Cheyanna Binford
Email: Cheyanna.binford@rfpco.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Playbooks have been put together for two major processes that includes their control equipment devices as well, both DEQ and EPA regulated. The Boiler Playbook, is for our Hog Fuel Boiler and all its operational components, which includes its regulated environmental control device equipment. The playbook was created in order to respond to any "emergency" incident that may occur, including power outages or equipment malfunctions. It is valuable because it is the plant's source of heat, sending steam to our major plywood processes, such as the veneer dryers and gluing/pressing process of the finished plywood. The boiler is essential to the Plywood making process, therefore, is critical equipment. The playbook also includes sections for safety and environmental standard operating procedures, work practice plans, and any surrounding components, such as baghouses, silos and the handling of material associated with those. The goal is for operators to reference this in any matter whether its emergency, standard practice, or training knowledge.

   The Dryer Tender Playbook is for all dryer tenders, backup tenders and/or operators in training to reference any operational or equipment values that may arise during operation of the dryers and/or control equipment associated. By training all tenders and operators with the same standards and guidelines, we will standardize knowledge and operational values. In the playbook, there is information for each dryer and its regulated environmental control device for which the plant has to operate in accordance with. Also in the book, emergency events and the procedures to react accordingly are included and will standardize how events are safely handled and followed. This allows all operators to get the same training and expectations from a management level on the incidents that could occur on any different shift.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The initial development of the Boiler Playbook was derived from an incident which included safety interlock difficulties, resulting in reportable environmental deviations, and major safety event resulting in more operating procedures and training. The playbook will reference emergency responses for both safety and environmental events/incidents, and any working components with the boiler (e.g. baghouses, silos, conveyers etc.). The boiler operators have dedicated much of their time to the initial operations knowledge, combined with the environmental and safety team for regulatory input and procedures.

   With the Boiler Playbook's initial success, it only made sense to create a Dryer Tender Playbook to mimic the quality of standardization with another critical process that has regulatory requirements for operation. The veneer dryers and their environmental control device equipment are essential to the plywood process. Dryer tenders are responsible for managing the veneer dryers with a very large source of heat and temperatures while safely preventing fires and thermal events. The playbook standardizes best practices for any upset conditions, including but not limited to fires and the guidelines with them. Everyone has the same training and same expectations. The senior dryer tender has dedicated much of his time to writing the playbook and creating the training, in which he will present to his fellow dryer tenders and trainees. The environmental and safety team have added input and information to help develop the playbook to meet regulatory requirements and standards.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Training has improved with the operations team, conveying information to each other and the management team. Emergency procedures have prevented possible reportable events by operators reacting quicker to the initial incident/event from having the book right there in front of them. In some cases, the playbook has helped to find other areas of improvement in the process, creating awareness for other operational factors.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The initial Boiler Playbook was created and introduced at the end of 2023 while the Dryer Tender Playbook will be fully implemented by March of 2024.

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The IBiZ NOW Safety Show

RoyOMartin

Contact: Cole Bryant
Email: Cole.bryant@royomartin.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Our corporate safety program, branded as “I Believe in Zero Now” (IBiZ Now), seeks to create and sustain a work culture where safe work practices are a way of life, not just procedures. Our communications/media team was tasked with updating all the company’s monthly OSHA (Occupational Safety and Health Administration) required training presentations with new, personal, custom video content to roll out monthly in 2023. The primary purpose of this campaign was to replace outdated and irrelevant OSHA training materials with up-to-date, relevant, engaging, and informative video content.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   Goal:
   - Create monthly video-based training modules covering the required OSHA topics in a fresh, relevant, and engaging manner that will replace old PowerPoint presentations.

   Objectives:
   - Create and finalize one video training module per month throughout 2023, each addressing a specific OSHA topic as determined by the safety department – measured and tracked by delivery date.
   - Create a corresponding quiz to accompany each monthly video– measured and tracked by delivery date.

   Strategies:
   - Coordinate with the Safety Department:
   - To ensure OSHA compliance is met.
   - To assist with scheduling shoots.
   - To provide distribution through safety meetings.
   - Ensure Facility Representation:
   - Include content that showcases the safety concerns and practices unique to each facility within the organization.
   - Include an inspirational segment that highlights why this safety topic matters.
   - Include recurring show closer with a tagline.
   - Maintain a 20-minute maximum length.
   - Include playful elements to add variety and maintain engagement.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Ultimately, our strategic plan to create an episodic show featuring our people and locations engagingly while educating on the appropriate topics was achieved.

   Our primary method of evaluating our success was the month-to-month approval process.

   As the media team is not a safety expert, we relied on the safety team's feedback to ensure compliance with OSHA standards.

   We also judge the effectiveness of our video campaign by the many positive comments and emails we received regarding the show (see support materials).

   We have many team members that have joined the safety committees, led group safety audits, and asked to be part of the videos after the first video was shown in January of 2023.

We learned the value of dialogue as a training tool. Finding ways to get our team discussing safety increases engagement and safety awareness.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   We have many team members that have joined the safety committees, led group safety audits, and asked to be part of the videos after the first video was shown in January of 2023.

   Video link below:

   https://vimeo.com/825246427/ff4f573e84?share=copy

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Lock Ring Upgrade

RoyOMartin – Oakdale OSB

Contact: Cole Bryant
Email: cole.bryant@royomartin.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   We recognized that our current lock ring used for our lock out program had a flaw. When the key bar was not fully pushed to the rear, it allowed opportunity for a team member or contractor to place a lock behind the key bar, thus not being locked out by that team member (see pic #1). As you can see from this picture, one lock is placed on the lock ring correctly and the other is placed incorrectly behind the key bar. Several times during our annual outage we observed locks being placed behind the key bar and had to get them corrected before the team member and contractor began their work.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   We thought about the situation and the need for a better solution to lock out equipment properly and fully by anyone on site. Our team designed the new lock ring (see pic # 2 & #3). With this new design, the key bar is pushed fully rearward and secured with a cotter pin. This ensures that no personal lock can be placed behind the key bar. Our maintenance team fabricated a model of our design, and we tried it out for proper functionality. It worked as it was designed to. The maintenance team has been working to change out all old-style lock rings and convert them to the new style.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   With the new lock rings in place, it assures that any team member or contractor that places his/her lock on the ring is properly locked out (see pic #3). Once the lock rings were in place, this was communicated to the team on the proper use of the new lock rings. This allowed for faster lock-out review before any work would begin, ensuring all were properly locked out to prevent them from an injury should locks be removed from the equipment.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   This innovation was implemented in April of 2023 (see pic 4 & 5). Team members were immediately appreciative of the improvement to ensure that everyone was properly locked out prior to any work beginning on the assigned job task. Auditing lock outs on the new rings saw 100% compliance with the process to have the key bar secured to the rear and all personal locks were in front of the key bar ensuring every team member was properly locked out.

Pic #1

Pic #2

Pic #3

Pic #4

Pic #5

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QR Code Mobile Equipment Inspections

West Fraser – Joanna

Contact: Josh Harris, Safety Manager
Email: Joshua.harris@westfraser.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Developed a QR code attached to our Smartsheet database for Mobile equipment inspections.
   QR codes were printed on vinyl stickers and placed in all mobile equipment on site. Operators scan the QR code with a company tablet provided in each area and complete the pre-use inspection. All inspections are stored in the Smartsheet database. Any items that do not pass inspection are noted and an email is automatically sent out to inform the appropriate supervisors and managers. This program has made the pre-use inspection system much more efficient and eliminated the process of tracking and storing paper inspection sheets.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   This was developed in-house and piloted in our crane first and then rolled out to each department.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Increased safety awareness for the operators using the equipment and for the managers responsible for getting the equipment fixed.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   May 2023 and the positive results were immediate. Comments from the operators accompanying the form were a huge benefit!

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Improved Warehouse Layout/Flow

Weyerhaeuser – Arcadia OSB

Contact: Casey Ellis, Safety Manager
Email: Casey.ellis@weyerhaeuser.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Reconfiguring the Arcadia warehouse from current layout, (Single access lanes) to FIFO layout with 2 access points, 1 for Operations and 1 for Shipping, meaning Operations access the lanes from the east side to place finished bundles, and Shipping pulls bundles from the west side, creating a "Push Pull" system.

   The key idea is to ensure that we pull the oldest inventory item, which in our current configuration is not possible. As we run production the 1st bundle is placed in a row, and subsequent bundles (newer) bundles are placed in front of the 1st bundle. When the material is required for shipment, the Shipping Department must first find the correct material, and then pull and move the last bundles ran to access the 1st bundles ran, creating waste by requiring more time to complete the operation.

   Reconfiguring the layout so all lanes are east to west with 2 access points, and procedurally having Operations placing the 1st bundle at the (Strike Zone) for Shipping, it reduces the time required for Shipping to locate the required materials and then finding the oldest (cured) product to pull. Shipping will be able to start with the oldest material and sequentially pull the production run.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   This innovation was first brainstormed by our Finishing/Shipping supervisor and his teams to easily pull the oldest inventory for shipping first, while reducing the amount of traffic required to do so. After conversations with the team members, our supervisor developed a well thought out plan, presented it to our site leadership team, and explained in detail the time savings and associated safety benefits from this proposal. Our leadership as well as mill employees were all supportive of the idea, and we were given the go ahead to implement this process.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   - Improved FIFO (First In First Out). This will mitigate potential aging/curing.
   - Reduce intradepartmental fork truck traffic. (Key safety benefit*)
   - Improve TOT (Time On Task) by reducing the travel distance required by each department and locating consumable materials at the Strike Zone, (Point Of Use). (Reduced truck loading time by 50%)
   - Improve inventory management by increasing the visibility of products.
   - Potential improved Production Scheduling. (Kanban method of scheduling).
   - Potential 15-20% improvement of bundle density in the warehouse.
   - Improved staging capacity for rail cars and trucks.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   Implementation date – August 2023. Benefits were recognized in October 2023.

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Safety Enhancements – Changing Thermal Oil Hoses

Weyerhaeuser – Elkin Panels

Contact: Jody Seaver, Safety Manager
Email: jody.seaver@weyerhaeuser.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Enhancing safety processes involving changing thermal oil hoses with implementation of innovative equipment.

   An engineered working surface platform was designed to provide safer access to the side of the press where thermal oil hoses are located. Prior to installation, access to thermal oil hoses was challenging because of spacing using only portable ladder(s). This set up was hazardous to employees because it placed a person directly under the hose fittings and exposed them to hot thermal oil. The new platform allows employees to be placed in a position above the hoses and eliminates the exposure risk.

   An Elkin team member identified a system to safely drain oil from thermal oil hoses during changing operations. This employee designed a valve to be placed on hoses to drain excess oil in a controlled/safe manner. The valve was fabricated at Elkin mill by designing a flange combination with an operational ball valve. This assembly is positioned on one end of the hose after the connection is broken. Following the design and implementation, the idea was replicated at other Weyerhaeuser sites to control exposure to hot thermal oil.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   Mill team had put up with a lack of good access for some 30 years and although it was discussed several times essentially coming up with a workable solution, building it and installing it was always considered next to impossible. In 2022, after having to change out several hoses the ‘old’ way, a combination of maintenance and operations team members discussed the idea of creating and implementing a safe working surface platform. The design specifications were difficult to complete because of limited space between hoses. Once a design was finalized by this team, it was sent out for engineering approval.
   The installation phase was contracted with a metal fabricating company.

   To deal with the challenge of leaking thermal oil during hose change an operations employee developed the design idea for a valve to control oil in thermal oil hoses while changing. In conjunction with other operators and maintenance, the valve was manufactured at our mill. The valve consists of a flange to seal the oil within a hose and ball valve to open/close in a controlled manner.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Follow up with employees who complete thermal oil hose changing operations, state the working surface platform eliminates the risk of hot oil exposure by removing them from the “line of fire”. The ball valve system safely contains heated thermal oil in a hose until the hose is lowered to the floor level. The valve is opened to provide safe containment of heated oil and eliminates the risk of excess oil leaving the hose during the removal process. In addition to preventing a splash effect, this system also reduces fire risk because of safe containment. Heated thermal oil is a flammable liquid that greatly increases the risk of fire when exposed to ambient air.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   Safe working surface platform:
   - Implemented in Q-1 of 2023; positive results were immediately recognized on first thermal oil hose change

   Ball valve system:
   - Implemented on March 2nd, 2023; positive results were immediately recognized on first thermal oil hose change
   -

Working Surface Platform

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Wax Cleanout Steam Reduction

Weyerhaeuser – Grayling

Contact: Adam Delwiche, Technical Manager
Email: adam.delwiche@gmail.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   When going into maintenance days, operators would use low pressure steam to purge the slack wax pipes to prevent freezing up. We switched to using compressed air to eliminate all of the risks in handling and using steam hoses.

   Compressed air has proven to be more effective at purging the lines; less material is left in the pipes, it's faster, works better, and is significantly safer. It also does not introduce contaminants from the steam condensate which leads to pipe and tank corrosion.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The idea was introduced by the Technical Manager as part of a wax improvement project. We first trialed using compressed air on small parts of the system and when that proved effective, we expanded to the entire system. As the benefits were learned by team members, everyone switched to using compressed air.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Steam hoses are over 250F and are handled by hand. Very rigorous attention to detail in operating the valves to add or remove the steam hoses was required, and one wrong step would get someone covered in steam and hot wax.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   Trials started June 2022 and it was fully implemented by Fall of 2022. Results were immediate.

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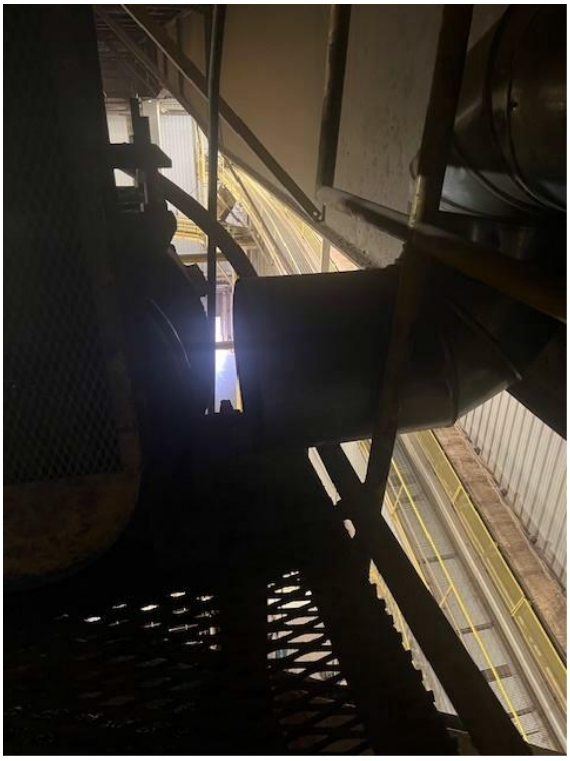
Gearbox Cooling Equipment

Weyerhaeuser – Sutton OSB

Contact: Chris Corder
Email: chris.corder@weyerhaeuser.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Gearboxes on upper levels in the mill continuously run high temperatures due to ambient temperatures and heavy loads. The maintenance team added a fan, plumbed to outside air and ran duct work to the gearboxes blowing continuous air on them. This cools the gearboxes down 50 plus degrees. This will help extend the life of both the oil and the gearboxes, reducing exposures to potential heat stress from working in high temperature areas and lessening the risks associated with changing out these gearboxes.



2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   This area is one of the hottest parts of our mill, normally 40 to 50 degrees warmer than ambient temperature at ground level of mill. Changing out either gearbox can take up to 6 hours. The maintenance team came up with the idea of adding air to keep the gearboxes cooler to prolong the life of the gearbox, thus breakdowns/changeouts are needed less frequently and less exposure to excessive temperatures.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Gearboxes on the upper levels in the mill were running very high temperatures due to ambient temperatures and heavy loads. By continuously cooling the gearboxes, we have extended the life of the gearboxes, reducing downtime and lessened the frequency of putting our team members in excessive temperatures for extended periods of time, where they could be exposed to heat stress.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   Cooling system was added April 5th, 2023. No issues with either gearbox or ambient temperature has been reduced approximately 40 degrees

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Chipper Projectile Elimination

Winston Plywood & Veneer

Contact: Kalvin Hackney, EHS Manager
Email: khackney@winstonplywood.com

1. Describe in detail the innovative/novel solution that was developed and implemented. (For equipment-based innovations, please provide a minimum of 4 different pictures of the safety innovation).

   Due to the dangerous nature of veneer chippers and the need to protect our employees from any incidents, we have upgraded the safety resources in the Chipper Room. We have wrapped our chippers in Shrapnel blankets to reduce the amount of damage that a person can take from a chipper malfunction that generates projectiles. This will protect the body from small fragments and pieces of shrapnel and prevent serious injuries or even death. We have also added multiple employee protection structures. These structures will protect the employees in the event of a machine failure.

2. How was this innovation developed and implemented? (How was it introduced, process used, people/positions/teams involved, etc.)?

   The task was to develop a method of prevention that would completely alleviate serious injury or death because of a chipper malfunction or failure. A team was assembled with the assignment of researching viable machine additions or ideas. Each member was tasked with finding solutions and presenting them to the team with supporting documentation that would ensure success. The Shrapnel Blankets rose to the top of the conversation. They were a proven method of protection. They are used in the race car industry to protect drivers, as well as policemen and military personnel. The blanket is engineered to contain a catastrophic explosion, preventing metal shrapnel from becoming airborne. A blanket was purchased to wrap each chipper. Protective structures were also added as a second means of protection. Each operator has a protective barrier that will protect them if needed. Training was also given to each leader and operator in addition to anyone that may visit the area. Visitors are not allowed in the area when the chippers are operating.

3. Describe the improvements that have been achieved by the implementation of this innovation. (Explain how the solution has reduced injuries/illnesses or the risk thereof, improved safety awareness on or off the job, improved safety systems, advanced the safety program, and/or improved the flow/reliability of the production process. Provide supporting facts/data, where available).

   Incidents that occur because of blade or part failures will not generate an injury because the metal or blades will be contained inside of the machine. The team is safer because of the prevention of metal or blades becoming airborne. This was proven when chipper #2 had a parts failure causing one of the blades to break. All damaged parts were contained inside the machine. The flow is better because the team has confidence in the measures that were taken with their safety in mind. They continue to tackle downstream issues because they trust the measures that have been added.

4. When was this innovation implemented and when were positive results first apparent (provide month and year for each)?

   The first blanket was installed in December 2021. We added additional blankets in June 2022 and started adding more structures in February 2023 and finished in September 2023.

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