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| **Topic** | Safer production |
| **Entry number (MPA Ref)** | 2024113 |
| **Title of Entry** | Handling reject bagged products |
| **Name of Company** | Mansfield Sand Co. Ltd. |
| **Location** | Two Oaks Quarry |
| **Video**  **(if yes, please include URL for video)** | No |
| **Other resource X (if yes, please include description)** | 7 images |
| **Fatal 6 Theme** | 4. Workplace Respirable Silica |
| **BACKGROUND** | |
| The Bagging Plant has an automated process whereby kiln dried sand is weighed to a pre-determined weight, passed to a bagging robot to be heat-sealed into polypropylene bags, before passing along a conveyor where it is stacked, by robot, onto pallets. Bag sizes are 12.5, 20, 22 and 25Kg.  An issue arises when a pallet of bagged product, containing up to 56 bags, is found to have one or more reject bags. The process for dealing with this was either to place the pallet close to the bagging conveyor and manually de-stack the “good” bags and replacing them on the conveyor, or empty the contents of all bags. Due to fixed key clamp fencing around the bagging line this meant manually handling the bags for several metres and getting them over the key clamp fence. The other option was to de-stack and empty the contents of all bags for the product to be re-processed, which in addition to manual handling risks introduced potential exposure to RCS.  This issue was first raised by a Near Hit submitted by an employee. | |
| **MANAGEMENT OF PROCESS** | |
| Once the issue had been raised, the site management team in collaboration with workers from the bagging plant, devised a solution of installing a set of gates within a section of the key clamp fencing. This would enable a forklift truck to safely position a pallet containing the reject bag(s) close to the bagging conveyor.  With controls in place i.e. forklift parking brake applied and keys removed, and newly installed open gates preventing access to other areas of the bagging line, staff could safely remove the “good” bags to place onto the conveyor. The operation was fully risk assessed, in consultation with employees, to ensure bags could safely be placed onto the line conveyor in a section which is outside the distance guarded area, with no risk of being drawn into the running conveyor or any potential nip points, due to its design / construction.  The issues resulting from handling reject bags of product were raised and discussed at H&S committee meetings, with representatives covering all disciplines / site activities in attendance.  Management supported and listened to the concerns and allocated time and resources to provide a suitable solution.  This entry reflects the MPA’s Vision Zero Values;  Empowerment - The issue concerning the manual handling of reject bagged products and potential exposure to RCS was raised as a Near Hit by an employee. All company personnel have a voice and are actively encouraged to speak up. Employees are strongly urged to submit Near Hits / Hazard Observations, which are promoted through newsletters and rewarded through quarterly/annual awards for the best Near Hits submitted.  Engaged, visible and consistent leadership – By allocating time, effort and resources to investigate and provide a solution, the health and safety of staff and site visitors is consistently improved. The timely resolution of issues / concerns raised demonstrates leadership commitment.  Zero tolerance of unsafe working conditions – The message of zero tolerance of unsafe conditions is continually reinforced to the workforce through engagement and empowerment, and the promotion and reward of Near Hit reporting.  High quality implementation – The design of the gates has been thoroughly researched with the involvement of bagging plant staff, to ensure all potential risks from this activity and other associated equipment are significantly reduced.  Compliance – By reducing the hazards posed by manual handling and the risk of exposure to RCS, ensures the business complies with its legal duties under the Manual Handling Operations and COSHH Regulations and HSE’s EH40 on Workplace Exposure Limits. | |
| **BENEFITS** | |
| There are many benefits of implementing this new system;   * By complying with legal duties through the reduction of manual handling risk and potential exposure to RCS. * Reducing manual handling risk ensures a healthier workforce with employees less likely to suffer musculoskeletal disorders. * Reducing exposure to RCS lowers the likelihood of employees developing respiratory problems. * These reductions result in a lowering of staff absence through ill health and improves morale. * Promoting a positive health and safety culture by encouraging staff to report health and safety concerns, and the leadership team developing and implementing suitable solutions to mitigate them, whilst involving the workforce throughout the process. * Reduced scope for potential civil ill health claims against the company. * By introducing this new process, it has ensured that manual handling hazards have been reduced by mitigating the need to handle bagged products from a low level and carry them a distance whilst negotiating a fixed fence.   In addition to the above, implementing these changes has improved efficiency of the operation. It was time consuming to manually empty the bags plus the additional time and resources to re-process the contents of an entire pallet. | |
| **INNOVATION** | |
| This newly introduced process reflects an enhancement and adaptation of working practices. Previously, when a reject bag was found on a pallet, the only means of getting the product from reject and “good” bags back into the process was to manually empty the contents and for the material to be put back into the washing and drying process.  The old method presented health and safety risks and increased the production costs.  This clearly demonstrates that the company is willing to listen to issues raised by staff to continuously improve health and safety standards and culture, and the efficiency of the process. | |
| **DEVELOPMENT & TRANSFERABILITY** | |
| The new process could be adopted by sites with similar set-up and processes on their automated bagging plants, when they are faced with a comparable problem.  By submitting this entry, it is hoped that the process improvements in this application will be shared across the MPA membership and wider industry sectors for the sharing of best practice. | |