

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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MINUTES OF THE ADVISORY COMMITTEE FOR GISO ARTICLE 69, SECTION 4542 Mixers

August 27, 2013
Sacramento, CA

1. Call to Order.

The meeting was called to order by Mike Manieri, Principal Safety Engineer, Occupational Safety and Health Standards Board (OSHSB), at 9:05 am on Tuesday, August 27, 2013, in Sacramento and chaired by David Kernazitskas, Senior Safety Engineer, OSHSB. The Chair was assisted by Bernie Osburn, Staff Services Analyst, OSHSB.

2. Opening remarks.

Mr. Manieri went over the handouts and started the introductions of the attendees. He explained that the Standards Board has found advisory committees to be an effective way to develop a proposal because of the expertise of the attendees, and provided general information about the rulemaking process.

3. Discussion of the proposed rulemaking:

Background:

Larry McCune, representing the Division of Occupational Safety and Health (Division), discussed the reasons for the proposed rulemaking. He explained that it is not the intent of the Division to "regulate grandma's countertop mixer," and that the regulation will cover more than just food mixers. For example, using Section 4184(b), this standard can be applied to equipment mixing dough, ketchup, adhesives, explosives, etc.

Mr. McCune explained that the Division wishes to develop a regulation that will protect an employee from being injured by either the power transmission shaft or the attachments within the mixer's bowl.

He mentioned a current investigation where an employee was killed using a vertical adhesive mixer. He says that the adhesive mixer is similar to a vertical dough mixer and it would be clearer to the regulated public if there were a regulation that could apply to the situation. He says that some people say that Lock-Out / Tag-Out (LOTO) should apply, but it is often not used by employees. Employees make too many exceptions to the rule and reach in to a mixer briefly to remove dough or adhesive from a hook while the machine is still running. Employees often do not follow the provisions of a LOTO program so it does not adequately protect the worker.

Mixers which are currently manufactured with a guard covering the bowl can be used to prevent accidents from all vertical mixer-like equipment. He concluded that if we require the guarding presently used on some vertical mixers to be used on similar pieces of equipment, it will be a step in the right direction.

Review of Letters Received Before the AC

ITW Food Equipment Group: William Schlieper, of ITW, which manufactures Hobart mixers, submitted a letter addressing the proposed amendment. Mr. Schlieper commented that several of the reported accidents would not have been prevented by the proposed guard or would have been prevented by other regulations, such as LOTO or injury and illness prevention training, if they were followed. He also commented that the required guarding would be very expensive to retrofit. Some recipes and attachments require the mixer to operate while the bowl is being raised into the operating position. He estimated that 35,000 – 45,000 Hobart mixers are operated in California. For the past 19 years, all mixers have been shipped with the proposed guards in place. The guards have been manufactured according to European standards. He asked why a regulation cannot require the mixer to be used in the condition that it was built by the manufacturer. If employers could not remove guards and LOTO requirements were strictly enforced, accidents involving mixers would be significantly reduced.

Whirlpool Corporation: Luke Harms of Whirlpool addressed the comments his company submitted before the meeting. He stated that none of the accident summaries involved countertop mixers similar to KitchenAid's mixers. Additionally, some of the attachments on KitchenAid mixers do not allow a guard to be in place during use.

Peter Anjorin of KitchenAid (a division of Whirlpool) asked whether the regulation would cover only commercial mixers or if it would cover household mixers used in a commercial setting. Sean Southard of Whirlpool said that the regulation would severely impact small businesses.

Review of Accident Data

The Chair explained that the accident reports were obtained from the federal Incident Management Information System using the search term “mixer” and covered about 10 years of nation-wide accident history (July 1, 2000 – December 31, 2010). Due to the high number of incidents, search terms like “horizontal”, “cement” and “meat” were excluded from the results.

Marlene Goetzler of Freeport Bakery and representing the Retail Bakers of America asked why we were discussing this rulemaking when we have only 17 accidents in 10 years, which is tiny in comparison to the number of slips and falls in the same time period. She wondered why the rulemaking was initiated. Mr. McCune responded that there is currently no standard requiring employers to use the guards provided. He aims to add a small requirement to stand mixers that would reduce the likelihood of some of the injuries.

Jim Knox of the California School Employee Association (CSEA) said that the CSEA represents 35,000 kitchen workers and many accidents occur in kitchens, unbeknownst to the Division. We cannot rely on the 17 accidents presented here and assume that they are the only accidents that have occurred with

regard to these mixers. Ms. Goetzler stated that serious accidents must be reported. Mr. McCune confirmed that amputations and missed work day accidents required reporting.

The Chair reviewed each accident summary and asked the committee to discuss whether or not the proposed interlocked guarding would have prevented the injury. For most of the accidents, the committee determined that properly following current regulations, i.e. LOTO, injury and illness prevention programs (IIPP), machine maintenance, or controlling entanglement hazards, would have prevented the incident. They also pointed out that it is difficult to determine if the injury would have been prevented by the proposed guarding because of the lack of detail in the summaries. Nevertheless, the committee concluded that 5-10 accidents may have been prevented by interlocked bowl guards and 1-2 occurred in spite of the proposed guard being in place. All of the accidents, but one, occurred in California.

Discussion on Necessity

The Chair pointed out that 10 accidents over the period reviewed may have been prevented by the proposed standard. He also stated that other existing standards could be applied to these incidents including LOTO, entanglement of clothing or personal protective equipment, general safety and training, and maintenance of equipment and guards. He then asked the committee if it was okay to remove a manufacturer-supplied guard or to not repair the supplied guard if it stops working properly. He asked if we needed to move forward with a rulemaking which would require employers to maintain the guard that comes with the vertical food mixer. Patrick Singh of Safeway commented that his organization has numerous mixers, some with guards and many without, but he has only recorded one minor injury (a cut to the finger) in recent years. He opined that this is evidence that a guarding requirement is not necessary. The Chair asked whether or not the Division should be able to enforce a requirement that an employer use manufacturer-supplied guards on mixers and the committee responded unanimously in the affirmative. Mr. Singh said that his company requires this already, even without the Division's enforcement. He fully agrees that if a piece of equipment comes with a guard, it has to remain functioning. The committee agreed with Mr. Singh's statement. The committee decided that proceeding with a rulemaking effort was warranted.

Floor vs. Countertop Mixers

The Whirlpool representatives pointed out that in each of the accident summaries reviewed, none of the mixers appeared to be a countertop mixer. All of the mixers seemed to be large floor stand mixers of 60 quarts or more. The Chair asked whether the committee wanted to exclude countertop mixers or limit the scope to a specific bowl size. He also asked if anyone was aware of any injuries using a smaller countertop mixer.

Nobody was aware of a serious injury using a countertop stand mixer. Mr. Singh pointed out that if we are trying to control the hazards, they exist with both countertop and floor stand mixers. Both types have models that come supplied with interlocked guards. He stated that he believes that the hazards are already addressed by existing standards, however.

Mr. Southard said that the degree of seriousness of an injury varies with mixer size due to the increased torque of the larger mixers.

Mr. McCune stated that the size of the mixer was important and would make the regulation easier for the public to understand. He said that he did not think that the Division wanted to regulate the very small mixers. Doing so would “open a can of worms”, he said. He asked what size was the smallest floor mixer. A Google search of Hobart mixers showed that the smallest floor mixer was 30-quarts. Mr. McCune said that the hazard of a floor mounted mixer was greater than a countertop because of the size of the motor and the accessibility of the bowl’s interior. He opined that a 30-quart floor mixer would be uncommon. Instead, he felt that it would be a countertop mixer. Mr. McCune said that if a countertop mixer comes with a guard, it should be maintained in working order. Floor mixers should all have guards after a certain date.

The Chair asked if it would be okay for an employer to remove a guard from a countertop mixer and the committee responded that it would be okay because the accident data does not show this practice to be unsafe. Mr. Harms pointed out that some countertop mixers cannot use certain attachments with the bowl guard in place. Sue McConnaha of Costco stated that a mixer using certain attachments, such as a vegetable slicer, is no longer a mixer, but a food processor. The committee decided that only mixers designed to be floor-mounted should be regulated by the rulemaking at hand.

The Chair asked the committee to clarify whether a mixer on the floor must be guarded, regardless of size. Ms. Goetzler pointed out that the committee was in consensus that countertop mixers should not be included in the regulation.

Mixers Manufactured after 1/1/2015 (or some future date)

Mr. McCune suggested language for the regulation requiring guarding of all floor mixers manufactured after a future date. The committee said that requiring guarding after a certain date of manufacture would be better than requiring it after a date in which the mixer is placed in service because some facilities buy second hand mixers or move mixers from one location to another. There would be a major cost impact, especially on schools and small businesses, if they were required to retrofit second-hand mixers as a result of being placed in service after a specified date.

Mr. Southard emphasized the importance of requiring guarding after a certain date of manufacture instead of date of sale. He said that once a mixer leaves a manufacturer’s facility, the manufacturer would have very little control over the mixer.

Bowl Guard Specifications

Mr. Anjorin said that the standard should be as specific as possible so that manufacturers know what they need to build. Mr. McCune said that the mixers should be made so that they will not start until the bowl and guard are in the proper position.

Maryrose Chan of the OSHSB suggested putting language into the standard that would require the shaft and attachment to be covered by the bowl guard while in operation. Mr. Singh wondered if it is possible

for all mixers (food and non-food) to be guarded in this manner. He said that there may be shafts on certain mixers that you cannot protect.

Mr. McCune said that UL 763 requires all power transmission parts to be guarded. Walter Goetzler of Freeport Bakery asked what he meant by power transmission parts. Mr. McCune responded that it meant the shafting and moving parts other than what is in the bowl. The Chair questioned Mr. McCune's assertion that UL 763 requires this guarding by pointing out that KitchenAid mixers are UL 763 approved and they do not provide such guarding. The Chair said that the internal mechanical parts of the mixer must be enclosed, but he did not believe that UL 763 required the shaft to be guarded. Mr. McCune said that as he understands the UL standard, it requires the power transmission equipment to be guarded, which includes the shaft. Mr. Anjorin confirmed that KitchenAid mixers are approved by UL.

Mr. McCune suggested expanding the regulation to include the revolving parts of the mixer. He said that we could add the words "to prevent contact with moving parts". Mr. Knox suggested adding "while in operation" to the end of the phrase. Ms. Chan stated that the problem with Mr. McCune's and Knox's suggestions is that the bowl guard must have a certain opening for the mixer to be able to function as a mixer and allow users to add ingredients through the guard. Mr. Singh pointed out that the current guard on Hobart and other mixers will not prevent contact with moving parts. He said that using the newly proposed language would require modified guarding on many mixers that are currently guarded. Several mixers, including the one that his company was cited for, include a guard that allows a hand or finger to reach through the guard, potentially exposed to the point of operation of the machine.

Mr. McCune asked if the point of operation was far enough inside the bowl that the current guarding would comply with general guarding requirements. The Chair pointed out that different models have very different spacing on the guards provided and that many do not comply with general guarding requirements. Ms. McConnaha said that she has seen many different bowl guards from several manufacturers and there is no consistency as to how the wire openings are spaced, even within the same manufacturer.

Mr. McCune then suggested that we let the manufacturer decide what type of spacing is sufficient for the bowl guard. The Chair agreed and proposed to remove the added language and simply require an interlocked bowl guard to be present. He said that there would not be any specifications for a guard because it appeared to him that the main desire from the Division is to have a redundant protection for locking out the power to the mixer. He posited that if the guard could prevent the LOTO-related injuries, the Division would consider the rulemaking worthwhile.

Mr. McCune stated that the guards would also reduce entanglement. He said that an employee may get his/her finger nipped by the point of operation, but the bowl guard would prevent someone from being wrapped around the shaft.

The Chair pointed out that the guards would not prevent all accidents involving contact with moving parts in the mixing bowl. For instance, the guard would not prevent hair from passing into the bowl. Mr.

McCune pointed out that we already have regulations to control entanglement hazards and sanitation requirements would further help.

The committee decided to also remove the words “while in operation” from the proposed language because it is understood. The Chair restated the committee’s position by saying that as long as the bowl guard is present, it can be made however the manufacturer chooses. The proposed language would effectively reduce accidents resulting from entanglement or LOTO even though it would still allow an employee to reach through the bowl guard and access the point of operation.

Mr. McCune reiterated that the Division is more concerned with preventing entanglement injuries than preventing someone from intentionally sticking his/her fingers through the guard.

Mr. Singh said that he understands and appreciates the Division’s point of view, but he is concerned with the wording of the standard and how it will be viewed 10 years from now. An inspector who is unfamiliar with the intent of the standard as determined in the advisory committee will cite the standard according to his/her interpretation at the time.

Ms. Goetzler agreed with Mr. Singh and said that employers are trying to comply with the regulations so the clearer they are, the easier it will be to comply.

Mr. McCune stated that after a regulation is adopted by the Board, a document called a Final Statement of Reasons is used to describe the Board’s intent in passing the regulation. Marley Hart of the OSHSB suggested using as much language from the horizontal mixer regulations as possible so that the requirements of the two mixers are as similar as reasonable.

Mr. Singh stated that unfortunately, when an employer is cited, the reasons for the regulation are not brought forward and the employer is forced to defend the citations. There is an economic impact on the business whether you pay the fine or fight it. Ms. Hart suggested that the clarity provided by the horizontal mixer regulation could help alleviate these situations and again suggested that we look to it for guidance.

Mr. Anjorin suggested that we use the horizontal mixer language that explains that power cannot be supplied to the mixer unless the bowl guard is in place. The phrase “so arranged that power cannot be applied to the agitators unless the cover/enclosure and the bowl are in place on the mixer.” Ms. Goetzler wondered if the need for small openings in the guard to allow for ingredients to be added through the guard needed to be mentioned. Mr. McCune suggested not mentioning the small openings since the intent is to allow the manufacturers to develop the guard however they see fit. The Chair suggested adding language to the paragraph that would require the use of a “manufacturer-supplied interlocked bowl guard”, with which the committee agreed. Mr. Singh asked why we would have to use only the guard supplied by the manufacturer if we could obtain something similar at a better price. The committee agreed that an equivalent guard should also be acceptable, so the language was added to the proposed paragraph. Mr. Singh said that the added wording would be helpful in cases where the manufacturer goes out of business.

The Chair asked if the paragraph was completed. Mr. Anjorin responded that we may want to change the phrase “cover/enclosure or the bowl” to “cover/enclosure AND the bowl”. The committee agreed that this would increase safety.

The Chair asked if the committee needed to address pre-mixing, where a mixer is operated at a slower speed to premix ingredients before the bowl is raised and protected by the covering. Ms. Goetzeler said that it would be very difficult to manufacture a guard that would rise with the bowl for slow speed pre-mixing. Ms. McConnaha agreed and said that such a requirement would require a completely new piece of equipment instead of just revising what is currently done. None of the committee members present pressed for requirements for a bowl to be guarded during pre-mixing.

Existing Mixers

Mr. McCune suggested that the committee work on an additional paragraph to address the removal of existing guards. The Chair asked if the new paragraph would apply to both floor and countertop mixers.

Mr. Anjorin said that requiring counter top mixers to use a guard when the mixer is supplied with a guard does not make sense. In many cases, the guard needs to be removed to use attachments or may not be wired in to the mixer’s circuitry. Mr. McCune responded that we want to keep as much safety supplied by the manufacturer as possible. Mr. Harms said that KitchenAid mixers have bowl guards available as an option, but they are not interlocked and are designed to be used with or without the guard in place.

Mr. McCune suggested the following wording: “Vertical mixers supplied with a bowl guard shall be operated with the bowl guard in place.” Mr. Singh questioned the reasonableness of the new paragraph. He pointed out that the current language allows an employer to take a presently manufactured stand mixer that has a guard and replace it with a mixer that does not come with a guard. He asked why switching mixers would be acceptable, but removing a guard from a mixer would not. Ms. Hart pointed out that an employer could choose to buy a mixer without a bowl guard to avoid enforcement of the standard.

Mr. McCune said “That’s fine” because requiring guard use on mixers that come with guards would gain some ground on controlling the exposure.

Mr. Singh pointed out an inconsistency in the two proposed paragraphs: he said that the first paragraph required bowl guards on only floor mixers after a future date and the current paragraph required the guards on all mixers, both floor and countertop, supplied with guards. Mr. Singh and Mr. Anjorin stated that the second paragraph should only apply to floor mixers so that it is consistent with the first paragraph. Mr. McCune countered that if the paragraphs only apply to floor mixers, then employers can remove the guards from countertop mixers regardless of size or date of manufacture. Mr. Anjorin and Ms. Goetzeler both stated that removing the guards from the countertop mixers was acceptable because of the lack of accident data suggesting that countertop mixers present hazards similar to floor mixers.

Ms. McConnaha said that because you can buy a countertop mixer with or without a guard, it does not make sense to require the use of the guard. Ms. Hart pointed out that it would not make sense to require employers to purchase two mixers (one guarded, one not) so that one mixer can be used for those tasks which cannot be done with the guard in place. Mr. Singh stated that if countertop mixers are not a big enough concern to be included in the first paragraph, why would they need to be included in the current paragraph. The committee agreed. Mr. McCune conceded that the regulation requiring the use of guards on mixers supplied with guards could apply only to floor mixers. The consensus of the committee was that regulations requiring bowl guards for vertical mixers should only apply to floor stand mixers.

The committee discussion then turned to which currently manufactured mixers should have a guard. Ms. Goetzler asked if the standard would apply to all floor mixers currently purchased or supplied with a guard. She stated that many mixers go from bakery to bakery across the country. She asked what is expected of employers who purchase an older mixer. Are they expected to research whether or not the mixer originally came with a guard? Is the employer required to retrofit the second-hand mixer because it once had a guard?

The Chair suggested language to the effect that any mixer sold after some future date would be required to have the guards in place. Mr. McCune said that a lot of equipment in the Safety Orders is regulated in a similar fashion. It can be required to meet standards as of the date of purchase or date of installation.

Ms. McConnaha said that mixers are not date stamped so determining the date of manufacture would be very difficult. Mr. Singh said that unfortunately, the burden of proof would fall upon the person who has been cited.

Ms. McConnaha said that Costco transfers mixers from store to store. She asked if the standard would disallow the use of a machine that had been used for years without a guard, unless a guard was purchased for the new location.

Mr. McCune said that the Division was concerned about workplaces that have a mixer with a guard onsite, but do not use the guard as designed. He said that sometimes the guard is beside the machine or in a corner of the room where it has been discarded. Sometimes the employer will respond that the mixer never had a guard. Ms. Hart wondered how the Division would be able to tell if a second-hand mixer was supplied with a guard or not. Mr. McCune said that he was concerned about those cases where the guard is present in the work area, but not attached to the mixer.

The Chair observed that enforcing guarding requirements on currently operating mixers would impact schools because they get old equipment donated that is more likely to be unguarded.

After much discussion, Mr. Harms stated that the paragraph we are trying to develop is too subjective. If you have a scenario where you can buy a mixer with a bowl guard, without a bowl guard, or as an option, there is too much confusion. He recommended getting rid of the second paragraph where we try and regulate existing mixers. The entire committee agreed.

The Chair asked Mr. McCune if he wanted a note in the record that he disagrees with the decision to remove the language requiring existing mixers to be guarded. Mr. McCune replied that he was “amenable to the consensus.” The advisory committee was unanimous that regulating existing mixers supplied with guards would be too confusing for employers to comply with or for the Division to enforce. The committee further agreed that “good” employers would keep and maintain the guards that came with equipment. They would also enforce the safety practices described in their IIPP. The second proposed paragraph for the standard was removed completely. Only the paragraph requiring guarding of all floor mixers manufactured after some future date remained.

Ms. Hart asked Mr. Knox if writing this standard would affect the behaviors of his school employees—would they even know if the change was made. Mr. Knox replied that it would depend on the district; some are better at safety compliance than others. He said that he was not sure if the proposal would change the culture at some of the districts. He opined that the best thing to do for safety compliance is to purchase new equipment when they can.

Effective Date

The Chair reviewed the purpose of the advisory committee again to be sure that it addressed everything it intended. The aim was to guard the attachments and the spindle of the vertical mixers. Mr. Singh asked about the future date that the requirement would take effect. Mr. Southard said that the federal government gives them 3 years to implement design changes affecting energy or water efficiency. Mr. McCune believed that many manufacturers were already in compliance with the standard so a long lead in time would not be necessary. The Chair stated that several of the manufacturers he contacted either provide interlocked guarding as standard equipment or made it available as an option. He suggested that January 1, 2015, would be the target date for requiring the floor mixers to be guarded.

Ms. McConnaha said that she had concerns that if the effective date were too soon, we would force employers into purchasing only Hobart mixers. She wanted to ensure that the time period was long enough for multiple manufacturers to have guarded mixers for sale.

4. Economic Impact.

The Chair explained to the committee that an important and required part of the rulemaking process is the identification of the cost impact of the proposed rulemaking, and he asked the committee members for their assistance. The committee was of the opinion that there would be no cost or fiscal impact from the proposed regulation because they would be able to replace the mixers over time with compliant mixers. Employers would be required to maintain the mixers, but would not be required to purchase additional guarding.

5. Conclusion.

The Chair reviewed the rulemaking process with the committee. He noted that the advisory committee had determined a necessity for changes and had reached a consensus on the proposed changes. He stated that committee members will receive a copy of the meeting minutes, along with a copy of the final consensus proposal within a month or so. The committee will have an opportunity to comment on the minutes and the consensus proposal before the rulemaking proposal is formalized. The Chair noted that

although consensus on the proposal was achieved, there will be additional opportunities for public comment. A formal rulemaking notice will be mailed out to the committee members. The notice will also be on the OSHSB website for viewing.

There will be a 45-day public comment period, concluding with a public hearing. Anyone may attend the public hearing and provide oral comments. Changes may result from public comment and/or during the review process. If any substantive changes are made, there will be one or more additional 15-day periods for public review and comment. After that it will go to the Board for adoption at a Business Meeting. If adopted by the Board, the proposal will go to the Office of Administrative Law which will have 30 working days to review it for compliance with the Administrative Procedure Act (APA). Finally, the proposal will be filed with the Secretary of State and, unless otherwise specified, will become effective (enforceable) on a date determined in accordance with the APA.

The Chair estimated that the rulemaking process could take up to a year from when the formal notice is published for public comment.

The Chair thanked the committee members for their attendance and participation and adjourned the meeting at 3:10 p.m.