

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Website address www.dir.ca.gov/oshsb**MINUTES FROM THE ADVISORY COMMITTEE
MEETING FOR TITLE 8, SECTION 3518****Air Compressors
Friday, June 27, 2008
Sacramento, California**

The meeting was called to order by the Chairman, Hans Boersma, Senior Engineer-Standards, Occupational Safety and Health Standards Board (Board) at approximately 10:00 a.m. Ms. Bernie Osburn, Staff Services Analyst, was present to provide assistance. Mr. Michael Oshita, Senior Pressure Vessel Engineer represented the Division of Occupational Safety and Health (Division).

The Chairman reviewed the Board's policy and procedures regarding the goals, objectives and use of advisory committees, and the Administrative Procedures Act requirements that must be considered during the rulemaking process. The Chairman stated that the committee meeting's purpose was to determine the necessity for the proposal and if a standard was needed, to determine appropriate regulatory language that would be clear and not duplicative of existing Title 8 standards. The Chairman stated that the committee is being convened per the Board's Petition File No. 466 Decision dated July 21, 2005.

The Chairman stated that it was customary for the Petitioner to present his recommendation and provide the committee the opportunity to ask questions of the Petitioner to clarify the purpose and necessity of the proposal. However, because the Petitioner, Mr. Perry Kelley, was no longer employed by Owens-Illinois, and had not maintained contact with Owens-Illinois or the Board, Board staff was unable to locate and invite Mr. Kelley to the advisory committee meeting. In Mr. Kelley's absence the Chairman summarized the Petitioner's recommendation, stating that the Petitioner asserted in his February 7, 2005 petition that the pressure relieving device (PRD) requirement in Section 3518(a) was meant to apply to reciprocating air compressors, not to centrifugal (radial) air compressors incapable of exceeding the maximum allowable working pressure of the system. In the event the centrifugal air compressor's controls fail or if the block valve is closed during the compressor start-up, the compressed air would flow back through the compressor without ever being able to activate the pressure relieving device. This condition results in a symptomatic noise known as "surging."

Mr. Oshita made a brief presentation about compressors, the need for PRDs and the proposed PRD exemption for centrifugal air compressors. Mr. Oshita stated that many of the centrifugal air compressors system designs exclude the pressure tank and in those cases the auxiliary piping acts as a pressure tank because considerable air volume is contained in the piping. He stated that when the PRD protected air tanks are not part of the air compressor system, the auxiliary piping should be protected from over pressurization. Additionally, Mr. Oshita expressed concern that the Petitioner's proposal to amend Section 3518 could be problematic with respect to Section 6873,

because Section 6873 regulates gas compressors not air compressors. He stated that in many centrifugal air compressor applications, the compressor cannot generate air pressures sufficient to exceed the system design pressures. However, because centrifugal compressors can be operated at very high air pressures when used in multistage configurations, any proposed standard that would exempt certain centrifugal air compressors should include limits on the working pressure of the system. Mr. Oshita reiterated the Division's concerns about exempting any air compressor system from pressure relieving device requirements because of potential danger to workers. He believed that the petitioner or the air compressor manufacturers should provide more information on how equivalent safety would be provided for centrifugal air compressors exempted from the PRD requirements.

The Chairman stated that from 1991 to 2008, no centrifugal compressors related accidents were recorded. Additionally, the Chairman stated that there are no equivalent federal standards for protecting the air compressor and its discharge lines by means of pressure relieving safety devices. CFR 1910 and 1910.169 only regulate the construction, installation of air receivers (air tanks) and the safety valves, drains, traps, gages and placement of valves in or on the air receiver.

Mr. Steven Sullivan, staff representative, USW District 12, expressed concern that the data of reportable accidents could be incomplete because accidents are often unreported. He emphasized the importance of always improving standards to protect workers and not reducing the level of worker protection currently provided by Section 3518. Mr. Sullivan went on to say that system design must consider all conceivable fault conditions. For example, when the centrifugal air compressor's controller fails and the motor runs at higher than design speed, the system will be subjected to higher operating pressures. The system should be designed to provide worker safety under all fault conditions. Mr. Sullivan stated that workers may be exposed to the auxiliary system and because of the long piping runs may not hear the compressor's warning signs such as the characteristic surging when compressed air flows back through the compressor.

Mr. Michael Teague, Fire Captain, Sacramento Metropolitan Fire District, stated that the hazards associated with air compressors often depend on the vessels design and air pressure differences between the different components of the pressurized system. Mr. Teague stated that the auxiliary piping runs located at the building ceiling level are often significantly heated and could easily reach 140 degrees Fahrenheit on sunny days. Mr. Teague expressed concern that this heated auxiliary piping may extend substantial distances into the building environments that may contain flammable gas or liquids or other hazardous conditions.

Mr. Oshita agreed with Mr. Sullivan and Mr. Teague and recommended adding a requirement for a system design analysis in Section 3518 that would require an analysis before the exemption for a PRD can be considered. The system design analysis would review all possible failure and environmental conditions that may affect the air compressor system to determine if the system could be safely operated without a PRD.

Mr. Sullivan and Mr. Teague agreed that the analysis should be required and done by the owner / operator.

Ms. Wendy Holt, Vice President, Production Affairs and Safety, Alliance of Motion Picture & Television Producers, expressed similar concerns about the lack of PRD protection for the auxiliary piping system and supported adding a requirement for a system design analysis if the proposal would go forward to rulemaking.

The Chairman noted that no written comments regarding the proposal were received. The Chairman noted that the review of the cost impact of the proposal shows no added cost to the employer, however adding a requirement for a system design analysis could add significant cost to compressor operations.

The Chairman asked each committee member to consider all comments and state his or her opinion regarding the proposal in an attempt to establish a consensus regarding the proposal to amend Section 3518.

Mr. Oshita stated that the Division and he felt that there is no solid basis for the necessity to amend Section 3518, that the existing language of Section 3518 provides a known safety factor in contrast to the proposal and that there were too many unanswered questions regarding the effect of the proposal on the safety of workers. Mr. Oshita opposed going forward with the proposed rulemaking.

The other Committee members agreed with Mr. Oshita and the Division in opposing the proposed amendment of the standard, and supported the current standard as is.

The Chair summarized the Committee consensus not to go forward and stated that Board staff will recommend terminating the proposed rulemaking based on the Committee findings. The Chairman stated that each Committee member would receive a copy of this meeting's minutes and a letter explaining the Committee consensus and Board staff recommendation.

There being no further comments or questions the Chairman adjourned the meeting at approximately 11:00 am.