Public Opinion and Comment Regarding OSHA's Powered Industrial Truck Requirements

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ASEM 616: Policy Issues in PtD

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Identifying Special Issues for Comment and Practicality of Agency Information

The premise of this discussion is to provide a public comment to the Occupational Health and Safety Administration (OSHA) Docket No. OSHA-2011-0062 concerning revisions for collection requirements within the Powered Industrial Trucks Standard 29 CFR 1910.178. The intent of the comments is to assist OSHA in determining the relevancy of performance information and methodologies that are used in measuring adequacy when operating powered industrial trucks (PIT's). The specific paragraphs that are being evaluated within the Powered Industrial Trucks Standard are:

- 1910.178 (a)(3)
- 1910.178 (a)(4)
- 1910.178 (a)(5)
- 1910.178 (a)(6)
- 1910.178 (1)(4)
- 1910.178 (1)(6)

As a practicing safety professional, the administrative requirements within the prescribed sections are not only a resource for an OSHA compliance officer but serves as a prevention tool that supports safe operations. The feedback that I will be providing is meant to validate PIT information requirements which contribute to risk reduction efforts and safer environments. In addition to its support, I will also express opinions on how OSHA could further its requirements by incorporating more prevention through design (PtD) methods within its content. PtD efforts that will be explored consist of enhancing reports through digital transmissions, expanding PtD specifics into the standard, and providing sustainability models for further refinement of PIT

requirements. The comments within this report are intended to help resolve OSHA's interests on the following (Sweatt, 2020):

- Whether the proposed information collection requirements are necessary for the proper performance of the agency's functions, including whether the information is useful;
- The accuracy of OSHA's estimate of the burden (time and costs) of the information collection requirements, including the validity of the methodology and assumption used;
- The quality, utility, and clarity of the information collected;
- Ways to minimize the burden on employers who must comply; for example, by using automated or other technological information collection and transmission techniques.

Validating Collection Requirements for Agency Effectiveness

There have been previous concerns surrounding the effectiveness of PIT reports that are to be maintained by the employer and collected through OSHA. The questioning within the docket ponders if the collected information is beneficial to the agency and employer or if it proposes additional administrative burdens. Before validating the reporting and collection requirements, guidance and specifics of the standards interrelation within industry will be examined.

The criteria within the collected reports are extensive and range from ensuring design capabilities, modifications, attachments, operator training, and evaluations. The specifics within these guidelines not only support the integrity of PIT programs but also prevent accidents when used adequately. When looking at previous PIT accident statistics, it is predicted that there are 34,900 serious accidents and 61,800 non-serious accidents annually. OSHA has estimated that

70% of these incidents could have been prevented by incorporating the elements that are covered within the PIT standard (McCue, 2018). These reports contain a multitude of parameters which help indicate how the failures or deviances could have possibly occurred. This paper argues the specifics which are to be recorded and maintained are conducive to preventing PIT accidents and need to be continued.

Sharing Reporting Elements through PtD Collaborations

An alternative that could assist with validating these reports would be incorporating a PtD framework that could enhance the capabilities of information collected and shared. Establishing an integration method through collaboration with designers and users would be beneficial for the information required in the standard. This method could create a stronger union between designers and users with the intent of enhancing PIT designs or functions before being placed into industry. A collaboration in this manner would also eliminate barriers and enable safety constructability input (Gambatese, 2019). An expansion of the collected reports could bridge the gap in industry so that work imagined versus work performed could be further examined in PIT operations.

Strategies that could assist both parties would be collecting these documents through a digital share network and incorporating a similar process like the National Institute of Occupational Health's (NIOSH) Research to Practice Program (r2p). The intent of the r2p, "allows NIOSH and small business to evaluate design alternatives in real world applications" which has led to patents and innovative solutions (NIOSH, 2013). If the PIT reports were merged into a similar program, it would not only benefit OSHA but the entire industry by expanding proactive counter measures. By sharing OSHA's required documents, exploration and planning

could be assessed more adequately through monitoring the upstream and downstream processes of effective design solutions.

Expanding PtD Specifics into Performance Requirements

Performance information and methodologies are important to the quality of an effective PIT program. Paragraphs (a)(3) through (a)(6) primarily deal with machine specifications and design alterations while Paragraphs (1)(4) and (1)(6) set forth safe operation requirements for operators (OSHA, n.d.). An addition within these requirements would be to utilize or require PtD methodologies in their approach along with redefining the scope of the information produced through the PIT standard.

When addressing design and education requirements, it is important to understand why this information is relevant and how effective feedback can be reorganized for future sustainability. During my career in heavy construction, using attachments or engineered modifications are relevant practices which require approvals from engineers and manufacturers. The documents that are collected and shared when using these applications assist in intercepting weight fluctuations and serve as an engineering remedy. The problems are that these elements lack communication on a broader scale which could be refitted through life cycle safety approaches and safety constructability reviews (Toole, 2018).

The merging of life cycle safety and constructability reviews within the reporting elements could help optimize safety and efficiency throughout PIT environments. Cycling information of PIT reports from contractors, trade contractors, and suppliers could influence more preliminary safety design reviews (Toole, 2018). Providing a basis for a generic PtD process within these two methods could continue refining the reports collected to improve the overall effectiveness of

what is being administered within the standard. PtD examples that could be used as a model to help re-evaluate how information could be used can be seen in Figure 1 and Figure 2.

Figure 1. Generic Process Example for PIT Expansion

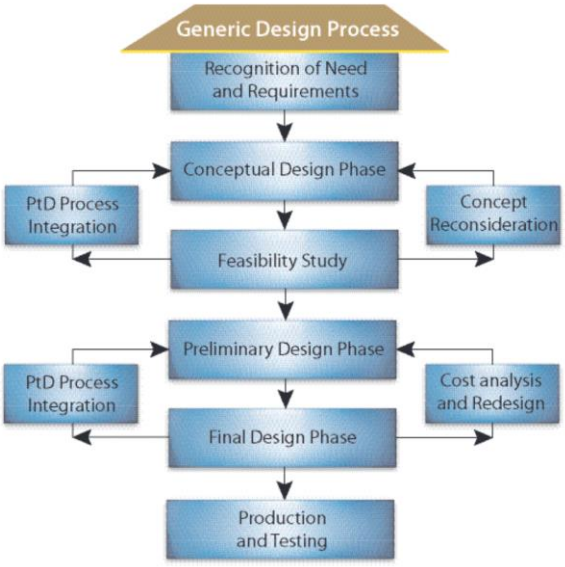
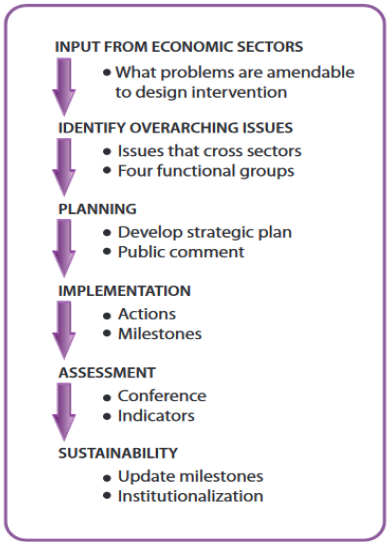


Figure 2. PtD Process Flow Chart for PIT Integration

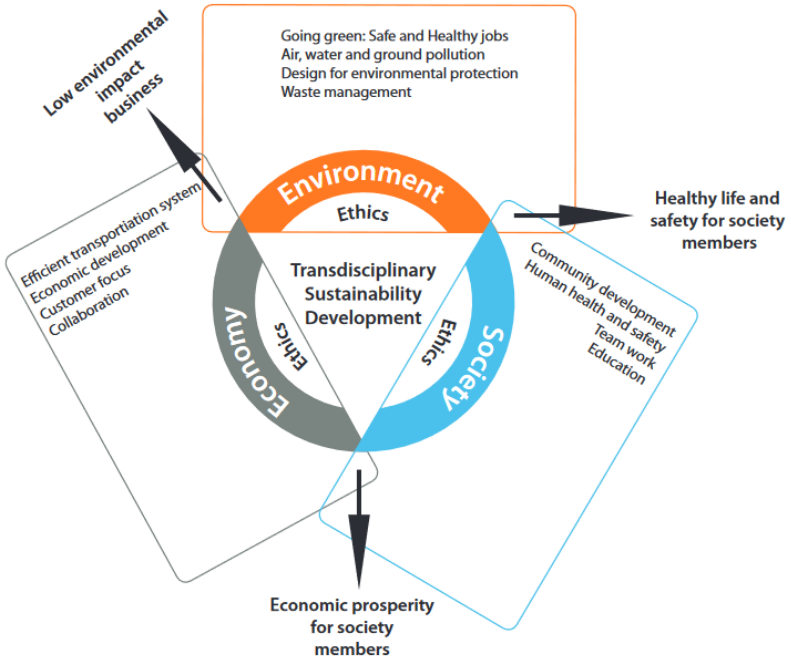


Note: Figure 1 and Figure 2 *Prevention Through Design: Transdisciplinary Process*. Retrieved from. http://www.theatlas.org/index.php/about-atlas-3/honoring-dr-john-war*: Prevention through design model and flow chart*

Understanding PtD Sustainability as a Key Intent of Collected Reports

A collective approach that would holistically improve quality of PIT reports would be to structure an additional guidance model explaining sustainability intentions rather than rule-following. Through this initiative, industry could visibly see how these requirements interact within their operational environments which can circulate information for future innovation and sustainability (Ertas, 2007). The basis of providing visual models of sustainability would help industry to realize the interconnectivity of environment, economy, and society. An example demonstrating sustainability in environments can be seen below in Figure 3. Even though figure 3 doesn't represent a PIT, the intent is to show how all the elements within OSHA's requirements are interconnected and could further their operational application. It's important to focus these elements within future endeavors rather than discontinue their collection.

Figure 3. Sustainability and Interconnectivity



Note: Figure 3 *Prevention Through Design: Transdisciplinary Process*. Retrieved from. http://www.theatlas.org/index.php/about-atlas-3/honoring-dr-john-war*: Sustainability and Interconnectivity*

Conclusive Comments on Reinforcing PIT Collection Reports and PtD Alternatives

The combination of both design and training documentation are part of prevention efforts that should not be viewed as a burden for either OSHA or an employer. The content provides a baseline that enables employers to monitor, share, and correct performance indicators before employees are placed into risky situations. These elements can also help identify failures within operating capabilities and design before employees are placed in the process. I believe that when they are used in a progressive manner, processes and systems can be effectively managed but alternative PtD strategies should be implemented to assist with reinforcing their capabilities.

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