

Manual Material Handling in the Automotive Industry: Research, Guidelines and Standards

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Abstract: Automotive manufacturing is, and always has been, intensive in regards to manual material handling (MMH). While the nature of tasks in the various phases of automotive manufacturing may be highly varied, most involve some degree of lifting and lowering as well as pushing, pulling and carrying. This presentation will explore the development of lifting guidelines focusing on the NIOSH Lift Equation and how it has been interpreted and applied in automotive manufacturing. The introduction of Kanban and Lean material strategies in the 1980s and 1990s produced many changes to how material was handled and delivered to production lines. These changes in business strategies and the resulting changes in the nature of many material handling jobs will be discussed and how the NIOSH Lift Equation was adapted and applied to it. The interplay and exchange between ergonomics practitioners, NIOSH and MMH researchers and eventually with international standards developers over the 25 year years.