ABSTRACT
It is the intent of the work to achieve the ergonomic effective design for a workstation belonging to a manufacturing system operating in the field of mechanical parts production. To this end, the NIOSH 81, NIOSH 91, Burandt Schultetus and OWAS analysis are accomplished for developing an improved workstation configuration in terms of interaction between humans and their working environment. Moreover the authors adopt an advanced approach based on Modeling & Simulation (M&S) in order to implement a three dimensional environment for recreating with satisfactory accuracy the real workstation and for detecting ergonomic problems that otherwise would be difficult to detect. In conclusion a final workstation configuration is proposed and significant ergonomics improvements are achieved.

Keywords: workstation effective design, ergonomic standards, modeling, simulation.
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