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Generic Visual Simulation of Manufacturing Equipment

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ABSTRACT

Simulation of a machine is very important before laser metal deposition is performed, as a tool to check collision detection and validate deposition result. There are several kinds of machines that are used for laser deposition and hence there is a need for a generalized concept for visual simulation of all kinds of machines. This paper presents the research conducted on describing each machine configuration in a generic format. A parent - child list and a dependency list obtained from the machine configuration are utilized to form a generic format. Such a format can be used to describe linear and rotational motion of the machines parts. This method has been tested on various examples to demonstrate its robustness and efficiency.