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Design for Error-Proofing Assembly: A Systematic Approach to Prevent Assembly Issues since Early Design Stages. An Industry Case Study

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Abstract : Design for error-proofing assembly is a new DFX approach to prevent assembly issues since early design stages. Assembly issues that can happen during the life phases of a system such as: production, installation, operation and replacement phases. This prevention is possible by designing the product with poka-yoke or error-proofing characteristics. This approach guide designers to make decisions based on poka-yoke assembly design requirements. As a result of applying these requirements designers are able to create solutions to prevent assembly issues for the product in development stage. This paper integrates the needs to design products in an error proofing way into the systematic approach of design process by Pahl and Beitz. A case study is presented applying this approach.

Keywords : poka-yoke, error-proofing, assembly issues, design process, life phases of a system
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