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Abstract

TRIZ application in Malaysia is in its initial stage, and major industrial domain (such as automotive and electronics) is hopping to gain root in popularizing and promoting TRIZ nationwide. The progress of utilizing TRIZ technique during cost down exercise in automotive industry may be broaden through the suggestion of suitable inventive principles that are likely be used. This article proposes twelves inventive principle summarized based on analysis of major quality documents gathered from two biggest local automotive OEM in Malaysia. These documents detail out problems most encountered and the suggested countermeasure, in correlation with TRIZ inventive principles.

Keywords
TRIZ, Inventive principles, Automotive, Cost down, idea generation

Biographies

Zarak Sh. Zamrah is the Principle Consultant from Methchem Engineering Consultancy, Malaysia. He earned BEng (Hons) in Manufacturing System Engineering from Northumbria University, UK, Masters in Advance Manufacturing Technology, UTM and currently completing PhD (Value Engineering, TRIZ Structured Innovation) in UTM. He has executed trainings and consultancies for government agencies, GLCs, MNCs such as Ministry of International Trade and Industry (MITI), Ministry of Human Resource (MHR), Ministry of Works Malaysia (JKR), Malaysia Productivity Corporation (MPC), Malaysia Automotive Institute (MAI), SIRIM, UEM Group, PLUS, UEM Sunrise, UEM Edgenta, UEM Builders, CIMA, IJM, Sime Darby, TM, TNB, Kellogg, CocaCola, Proton and Perodua Manufacturing. Training and consultancy conducted including Vendor Development Program, Business Excellent Program, 1InnoCert Program, TPM Recognition Program, and various technical programs including lean, TRIZ, FMEA, DFMA, Cost of Poor Quality and VAVE. His research interests include product design and manufacturing, innovation, VAVE, lean, business excellence framework and vendor development program.
Safian Sharif is a Professor from UTM Faculty of Mechanical Engineering. Graduated from UTM in B. Mech. Eng. (Production), M.Sc (Advanced Manufacturing Technology) from UMIST, UK and PhD in Manufacturing from Coventry University, UK. His area of specializations are in machining of aerospace materials such as titanium alloys, inconel and other materials such as stainless steel as well as wood. He is also actively involved in other research areas such as sustainable manufacturing, rapid prototyping and casting. Dr. Safian has published more than 140 articles both in reputed journals and proceedings and currently a Dean of Research Alliance in Frontier Materials.