

Mitigation of Defects in CD-R Manufacturing Process Through Cause & Effect Diagram

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ABSTRACT

Data storage and its carriage from one place to another is very important in the world of digitalization. A wide spectrum of storage devices is available in the markets like Hard-Disk, USB, Optical Media, etc. Out of the specified devices, a range of optical media products is available including Recordable Compact Discs (CD-R), Rewritable Compact Discs (CD-RW), Recordable Digital Versatile Discs (DVD-R), Rewritable Digital Versatile Discs (DVD-RW) and blue laser discs (HD-DVD and Blu-ray). In fast changing competitive era, less production cost, higher productivity, high quality product, defect free operations are required and appreciated to sustain. CD-R manufacturing process has various stages viz. IMM (Stampering), Dyeing, Sputtering, Lacquering, Drying and Label Printing. Mount Fuji, Scratch, Improper Dyeing, Improper Sputtering, Black spots and R/W Fail are some common defects in CD-R manufacturing process. These defects directly affect on quality, productivity and profitability of organization. In this paper, the data has taken from Moser-Baer (I), Greater Noida. This paper presents CD-R manufacturing processes and defects that lead to downgrade or rejection of the product. The study also shows the analysis of these defects with Cause & Effect Diagrams to identify the prominent causes, corrective actions and preventive actions to improve quality level and productivity of the product.

Keywords: Injection Moulding Machine, CD-R Defects, Optical Media, Cause & Effect Diagram (CED), CAPA