

## **Improving casting productivity by utilizing automation**

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### **Abstract**

Foundry industry in South Africa is at its life time low, with globalization and imports being the main challenge for the industry, companies which are still operational need to improve their productivity in order to remain competitive and in business. The aim of this study is to determine the effects of automation in casting operation's productivity. This will lead to lower production cost and improving organization profit. Quantitative study was done, cycle time and production out puts data of the machine before automation was collected and analyzed, this was compared with the data after automating the same machine loading and offloading. The results indicated that automating the machine improve productivity by 20% therefore there is evidence that automation can improve productivity.

### **Keywords**

Productivity improvement, automation, casting, and foundry industry.

### **Biography**

Include author bio(s) of 200 words or less.

**Grace Mukondeleli Kanakana** is an Assistant Dean of the Faculty of Engineering and Built Environment at Tshwane University of Technology. She earned her B-Tech industrial from the University of Technology South Africa, Masters in Business administration from Nelson Mandela University, and PhD in Engineering Management from University of Johannesburg, South Africa. she has published journal articles and conference papers pertaining to need areas from an industrial engineering perspective. Dr Kanakana has carried out research studies with various research institutes and universities within South Africa and beyond. Her research interests include manufacturing, quality, benchmarking, optimization, project management, and lean six sigma. She is a member of local and international professional organizations.