















- Quality control must be done by each individual. Strong quality control must be enforced.
- The metal casting department must check if the moulds are thoroughly cleaned.

#### V. CONCLUSIONS

This project focused on improving quality for the company by identifying the root causes of defects. The company was producing 10% more than required to compensate for scrap. In 2013 and 2014 alone, about R400 000 worth of products were scrapped. This indicated that the quality management tools that have been put in place were not being utilised. Different problem solving tools were used to investigate and analyse the root causes of defects.

Three significant defects were identified, which are Dull Run, Ceramic Inclusions and Shrink. The three defects combined contribute about R280 689 to the total losses incurred by the company due to scrap. This is about 78% of the total costs of all scrap. It was evident that in order to reduce the costs of losses, the concentration needed to be directed to these three defects.

The results showed that the most common contributors to these defects were man, methods, control and machinery. Some of the significant root causes identified were the lack of employee training, poor quality control and lack of supervision. The root causes were then analysed using the 5 Whys method. Once the root causes were analysed, a corrective action plan was developed. The plan included the responsible person and the implementation start date. Some of the implementations will highly depend on the availability of funds.

This paper showed that by utilising problem solving techniques, manufacturing companies can identify root causes to the problems. They can be able to eliminate these root causes and thereby improve quality and productivity. These improvements do not require high capital investment.

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