

Development of Pumping Ring in 5 Axes VMC

Rishi Sagade¹, Ashwin Patil², Sanil Patil³, Kishor Parde⁴, Dr. Prakash Kadam⁵

Students, Department of Mechanical Engineering^{1,2,3,4}

Guide, Department of Mechanical Engineering⁵

JSPM'S Jayawantrao Sawant College of Engineering, Pune, India

Abstract: *This project is about development of various parts used in the industry that uses VMC machines like 7 Axes and 5 Axes and by finding the alternative method for development of such a part or component which positively reduces the cost and time required to manufacture the part. The development of pumping ring using 5 Axes machine is the alternative method used over another method which uses 7 Axes machine which is costly and time consuming, the 7 Axes machine is indeed the most advanced VMC machine in the market providing the work output more precisely and accurate. It is time consuming and costly as compared to 5 Axes VMC machine, when we take this particular component in consideration the 5 Axes VMC machine is more reliable as compared to 7 Axes VMC machine as 5 Axes VMC provides the similar work output and precision.*

Keywords: Centrifugal Pump, Mechanical Seal, 5 Axes VMC/ 7 Axes VMC, Machine Alternate Manufacturing Proces, Reduce Of Cost

REFERENCES

- [1] API, Pumps — Shaft Sealing Systems for Centrifugal and Rotary Pumps ANSI / API Standard 682 ISO 21049: 2004, Pumps — Shaft Sealing, 2005.
- [2] R. Clark, H. Azibert, visualizing fluid flow and heat transfer in rotating shaft seals., In: 15th Int. Conf. Fluid Seal., BHR group conference series publication, 1997: pp. 353–378.
- [3] C. Carmody, A. Roddis, J. Amaral Teixeira, D. Schurch, Integral pumping devices that improve mechanical seal longevity., In: 19th Int. Conf. Fluid Seal., BHR group conference series publication, UK, 2007: pp. 235–247.
- [4] C. Carmody, A. Roddis, Saving Energy, Saving Water and Saving the Planet through the use of Affordable, Premium Bi- Directional Pumping Rings, In: Des. Optim. through Value Eng. Fluid Mach., IMECHE, 2008: pp. 1–15.