

Figure 10: Difference in Units produced year wise

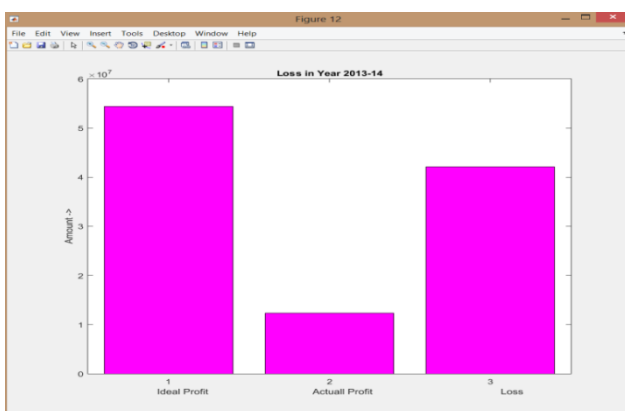


Figure 11: Loss in year 2013-2014

6. Conclusion

In this research work, survey of the micro hydro plant is done and the problems present in this plant are discussed. Micro hydro power plants are used for generating electricity at small scale. But this micro hydro plant is not producing output as it should produce. So the problems which are in this plant i.e. problem of trash rack, turbine and shaft must be removed and hence production of electricity can be increased. The trash rack is used for filter out the waste material from the water and hence only water can go through the intake into the turbine so that there comes no problem in production of electricity. There head on the river which is generally of size 2.5 m. If the size of head on the river is increased to 5 m then more and more electricity can be produced so that there is no loss of electricity. There should be more and more remote areas and electricity should be given to agricultural and irrigation areas. If there are more remote areas, more electricity can be produced and then used more and more. Therefore required electricity can be produced from this micro hydro power plant and there is no loss of electricity.

References

[1] Module 5 “Hydropower Engineering”, Version 2, CE IIT, Kharagpur.

- [2] Chapter 8 “Micro Hydro Energy Resource”.
- [3] Arun Kumar, Tormod Schei, Alfred Ahenkorah, Rodolfo Caces Rodriguez, Zhiyu Liu, ”Hydropower”, Cambridge University Press, Cambridge University Kingdom, USA.
- [4] Josse Bonhomme, Robert Clark, Scott Davis, Stephen Graham, “Micro-Hydropower Systems: A Buyer’s Guide”, CANMET Energy Technology Centre, Canada.
- [5] Li Wang, Dong-Jing Lee, Long-Yi Chen, Jyun-Ying Yu, Shen-Rong Jan, Su-Jen Chen, Wei-Jen Lee, Ming-Hua Tsai, Wei-Taw Lin, Yuan-Chung Li, Bai K Blyden, “A Micro Hydro Power Generation System for Sustainable Microgrid Development in Rural Electrification of Africa”, IEEE, 2009.
- [6] Vineesh V, A. Immanuel Selvakumar, “Design of Micro Hydel Power Plant”, International Journal of Engineering and Advanced Technology (IJEAT), Vol. 2, Issue 2, December 2012.
- [7] Antonio Roque, Duarte M. Sousa, Claudio Casimiro, Elmano Margato, “Technical and economic analysis of a micro hydro plant- a case study”, IEEE, 2010.
- [8] Roshni Bhoi, Dr. S.M. Ali, “Potential of Hydro Power Plant in India and its Impact on Environment”, International Journal of Engineering Trends and Technology (IJETT), Vol. 10, No. 3, April 2014.
- [9] Himani Goyal, M.Hanmandlu, D.P. Kothari, “An Artificial Intelligence based Approach for control of Small Hydro Power Plants”, Center for Energy Studies, Indian Institute of Technology, Hauz Khas, New Delhi.