



Fig. 6 Flow chart

V . Analysis of Experimental Results

Test on the outer cylindrical grinder of MG1432, test results as shown in table 6.

TABLE 6 The Test Results Analysis Table

Control method	The original vibration acceleration	after Balance vibration acceleration	Vibration rate drop
fuzzy control	4.4	0.3	93.2%

From the shows of table 6, this controller has played a good role in inhibition of unbalance, the grinder vibration quantity decreased obviously.

VI . Conclusion

In this paper, using the principle of weight balance, aim at the difficult problem of establish accurate mathematical model of balancing head, puts forward the fuzzy control algorithm to control the vibration caused by the eccentric wheel. After the test, this system can reduce the amount of unbalance of grinding wheel rotates, reduce the grinder vibration caused by the eccentricity of grinding wheel, improve the quality of the grinding of workpiece .

References

- [1] HaitaoMa ,wenYou, WenchaoJia, Based on the weight balance principle of the grinding wheel dynamic balance system modeling method. Journal of changchun university of technology. In March 2006, 27 (7). 21-23.
- [2] WenYou,HaitaoMa,WenchaoJia, Modeling and analysis of the grinding wheel dynamic balance measurement and control system. The computer measurement and control. 2006 (8) 14,. 1049-1051.
- [3] JianbinZheng,Lingling,WeiZhou,Rotor dynamic balancing steady speed fuzzy control research. Journal of wuhan university of automobile industry. Vol. 21 No. 5.
- [4] DongchunWu,ShuangJiang,Parameter self-tuning fuzzy controller design and matlab simulation. Electric welding machine. Vol. 41, No. 5 May 2011.
- [5] JiangPing,A PID fuzzy controller. Automation panorama. 2011 (01).