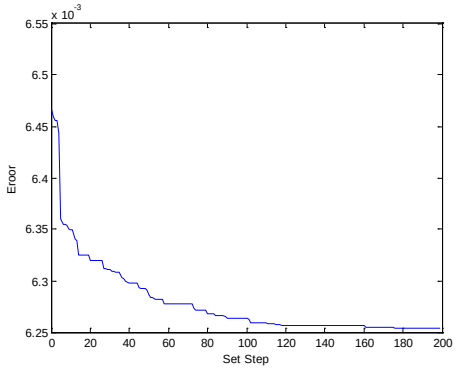

Fig.1. Figure of the error trend in the training of SFSA

Data after 55 sets of data extracted through the use of optimization algorithms to optimize neural network controller to complete the fitting with the source data, proved the robustness of the controller and optimize the effect.

Artificial fish swarm algorithm applied directly to the RBF neural network, network error0.00005 no longer change after 200 steps to reach the error requirement. This shows that the artificial fish swarm algorithm enables the RBF neural network initial value select appropriate, overcome the genetic algorithm to search a long time, and the slow shortcomings, is a fast and reliable optimization of RBF neural network method. The results obtained is shown in Figure 2:

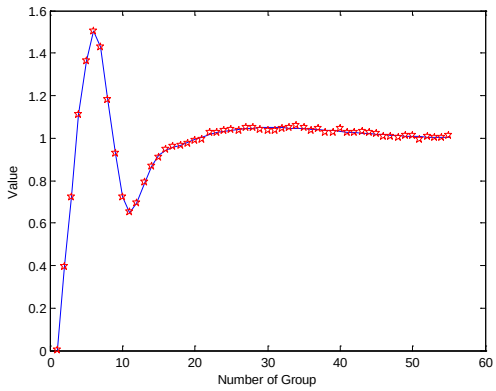

Fig.2. training data fitting results

5 Conclusion

In this paper, the simulation results can be seen, the controller designed in this paper can be stable control of double inverted pendulum system, and has a good anti-jamming capability. From the actual control curve to be seen, this paper, the design of the RBF neural network controller based on artificial fish swarm algorithm is effective.

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