Abstract:

Nowadays, heat dissipation for electronic chips, microprocessors in electrical and electronic equipment, especially in Site Router telecommunication equipment when operating at high intensity is an urgent process to increase life expectancy, productivity and performance. Many telecom providers such as Huawei, Ericsson, Cisco etc have offered solutions for liquid cooling, cold air, heat pipes. However, the complexity, the cost and the effect are not high. Furthermore, there is shortage in optimal parameters of design and operation [1-5]. Derived from the above fact, the author has calculated and modeled a Site Router equipment using extruded blast heat exchanger with a large heat exchanger structure which withstands pressure when falling, combining airflow from fans to speed up the dissipation of heat. In this paper, the author presents the optimal calculation and control process of the size of the heat sink and the contact plate under the influence of actual operation conditions at the specified velocity of the air flow from which the model is built directly to determine the number and the size of the heat sink’s plate fins.

Key words: Airflow; Cooling process; Heat dissipation; Optimal control; SiteRouter equipment.