A Networked Body Temperature Monitoring System Based on Single Chip and Reverse Carnot Cycle

Jing, Tang (School: Peiyuan Middle School)

After knowing that workers who have been working in the steel plant for a long time are extremely prone to heat stroke, even many people do not know after heat stroke and cause many accidents. I came up with the idea of making a microcontroller based on the reverse Carnot cycle internet body cooling monitoring system. The intelligent temperature control system is composed of intelligent temperature control system and monitoring user's vital signs system. The intelligent temperature control system is mainly controlled by a single chip microcomputer, and the temperature sensor is used as a temperature regulating switch. It is composed of water cooling refrigeration system and heat exchange dressing device. *Make the water-cooling refrigeration system carried on the body by using the principle of reverse Carnot cycle, discard the limitations of the traditional cooling suit pipeline dragging in the market at present,; *The production includes three heat exchange wearing devices: vest, sleeve and neck sleeve. The device is equipped with a spiral dish water pipe, which carries out heat exchange between cold water and backflow venous blood to remove body heat. *By using the program 'monitoring the user's vital signs system 'on the computer end in a way of one observation to many observations, the MCU of the intelligent temperature control system receives the feedback temperature information, and monitors the environmental temperature, the user's temperature, and the water temperature after heat exchange with the human body, so as to warn users of abnormal vital signs;