Power Saving REPORT

Researchers in the WinD Lab made concerted efforts to save energy in a cross-departmental way

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WinD Lab

Intermittent stop of the outside air treating air conditioner

Thermal insulation of steam pipes

This report introduces energy saving activities performed in fiscal 2014 in the WinD Lab, a laboratory building at Osaka Works. The WinD Lab accommodates research centers and institutes of 10 divisions, as well as intellectual property departments, with roughly 700 workers. While energy saving systems were already in place in the building at the time of its construction in 2010, an energy saving diagnosis conducted on holidays in April 2014 revealed an issue that energy consumption dropped by only 30% on holidays in comparison with weekdays.

It was difficult to promote energy saving in the R&D units as they are composed of various organizations. Urged by the wasteful use presented in a numerical form, however, energy saving activities involving all divisions were launched on a cross-sectoral basis.

We saved energy mainly through three initiatives. Firstly, we examined the operating hours of the outside air treating air conditioner. It used to be operated at full capacity except long holiday seasons for a reason related to temperature, humidity, and CO_2 concentration. Based on measurement tests over about one and a half months, we achieved the intermittent stop of the device at night and on holidays. The measurement was conducted with a wireless temperature sensor, a proprietary energy saving technology of Sumitomo Electric.

The second initiative was reduction of power consumption in the clean room. While power used in the clean room represents approximately 30% of the total power consumption in the WinD Lab, air conditioning is essential in the room, where dust has to be removed. It was a difficult challenge but we tried to solve it with a sense of responsibility. We actually stopped operation of the clean room to verify the result because it has direct impact on the quality of products. We steadily repeated the process of collecting micron-size dust and analyzing it and acquired know-how for energy-saving operation of the room.

As the third measure, we installed thermal insulation materials to steam pipes, which was performed with the energy and power saving funds prepared in Sumitomo Electric.

As a result, while the target was reduction of 133 MWh/year or 1.0% from the fiscal 2013 level, we reduced energy consumption by 173 MWh/year or 1.3% from the fiscal 2013 level in fiscal 2014.

In addition to the teamwork of the Osaka Works Environment Committee, enthusiasm of the researchers to pursue energy saving also contributed to the success. We will keep working together to save energy so that we can accelerate development activities and improve energy efficiency at the same time.

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