

15. Study on Room Pressure Control Technique for High Quality Cleanliness of Rooms

-Part 3 The Results of Applying the Directly Air Volume Control System to the Actual Building & Airtightness Evaluation System for Rooms-

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It is difficult to change the air change rate of each room among several adjacent rooms with keeping the airflow direction between rooms by the differential pressure control system. But the Directly Air Volume Control System made it possible at the actual building and following performances were confirmed. When the air change rate of one room among several adjacent rooms was changed in the Directly Air Volume Control System, pressure fluctuation was produced during about ten seconds. But required airflow direction between rooms was kept. Even though the door was open at one room in the Directly Air Volume Control System, airflow direction between rooms was kept constant. At the room to which differential pressure control system was applied, the overshoot phenomenon of room pressure during relatively long time was measured when the door was open.

For the facility to which high airtight performance was required, airtightness of each material or devices which consists the room was measured by using the easy measurement system for airtightness, and total airtight performance of rooms were simulated. By using this Airtightness Evaluation System, it is possible to select the material or to improve devices for rooms so that rooms have required airtight performance.

Key words: differential pressure, differential pressure control, air volume control, airtightness