

Air Condition Equipment Division

Air washer

Heat exchangers of Air handling unit called "Air washer" were used, spraying chilled water or hot water in the air, before 1950s. Heat exchangers made of copper tubes and aluminum fins became popular around 1950, while "Air washer" declined gradually.

ly in use.

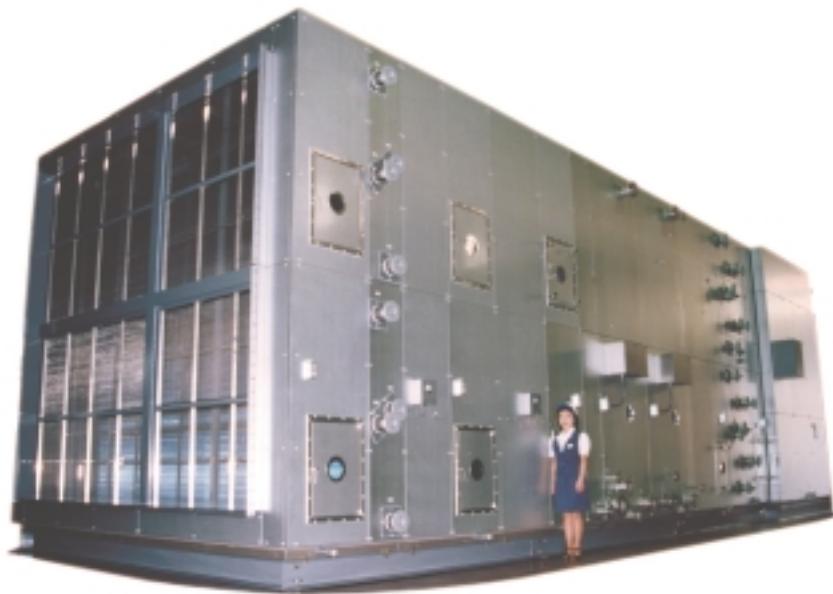
However "Air washer" is reconsidered as air treatment equipment for super clean room in semi-conductor factory, Japan's most advanced technology, and for biological-related clean room in laboratory animals facility for pharmaceutical and medical research, increasing rapidly in its shipment recently.

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1. Gas removal equipment for semi-conductor factory (Trade name : Scrasher)

Rare gas ingredient such as NH₃, SO_x and NO_x in outside air greatly influences a yield in the manufacturing process of high-density semi-conductors. This unique air washer utilizes gas absorption ability of pure water to remove the gases efficiently.

Adoption of air washer decreased the amount of chemical adsorption filter compared with conventional equipment using chemical adsorption filter with regular exchange and waste treatment. Pure water used is recycled as raw material for pure water production.

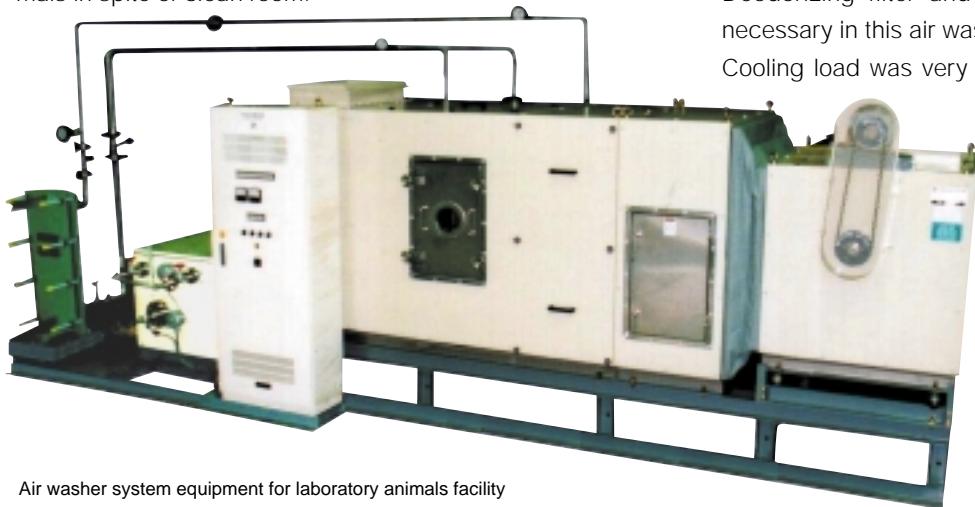


Outside air treatment equipment for super clean room

2. Air washer for laboratory animals facility

Various kinds of experimental animals for pharmaceutical and medical research are raised in clean rooms.

Offensive odor from urine and feces (NH₃ gas), fallen hair, and dust from feed and floor straw generate in raising animals in spite of clean room.



Air washer system equipment for laboratory animals facility

In the air washer, these odor (gas) and dust are removed, and air is cooled by spraying chilled water in the polluted air. Then clean air is obtained through the final high-performance filter to return it to the room.

Deodorizing filter and medium-performance filter are not necessary in this air washer unlike conventional equipment. Cooling load was very large in the conventional system because supply air to the room was outside air entirely, in relation to offensive odor.

Saving energy has been achieved greatly because of recycling of the air from the room in this air washer.