

Abstract**ADSORPTION HEAT EXCHANGER**

An adsorption heat exchanger (20) is constituted by a fin-and-tube heat exchanger. In the adsorption heat exchanger (20), a first tube column (41), a second tube column (42) and a third tube column (43) are formed in order from upstream to downstream in air flow. The adsorption heat exchanger (20) is formed of a first column part (21) including the first tube column (41), a second column part (22) including the second tube column (42) and a third column part (23) including the third tube column (43). In the adsorption heat exchanger (20), a first adsorption layer (36) is formed on the fins (30) in the first column part (21), a second adsorption layer (37) is formed on the fins (30) in the second column part (22) and a third adsorption layer (38) is formed on the fins (30) in the third column part (23). The amount of adsorbent contained in each adsorption layer increases in order of the first adsorption layer (36), the second adsorption layer (37) and the third adsorption layer (38).