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Abstract

With the diaphragm valve in the vacuum exhaustion system applied to the semiconductor manufacturing facilities, it is possible to prevent the corrosion of the valve members caused by the accumulation and adherence of the substances as produced by the thermal decomposition, the clogging caused by the substances as produced, and the seat leakage. Further, it is possible to make the facilities for the vacuum exhaustion system small-sized, and, as a result, to lower the costs. It is also possible to reduce the diameter of the vacuum exhaustion system pipings for shortening the vacuum exhaustion time.

Specifically, the diaphragm valve 1 is provided with a body 2 having a flow-in passage 6, a flow-out passage 7, and a valve seat 8 formed between the passages; a diaphragm 3 installed in the body 2 and permitted to rest on and move away from the valve seat 8; and a driving means 4 installed on the body 2 to allow the diaphragm 3 to rest on and move away from the valve seat 8, wherein synthetic resin films 5 of predetermined thickness are coated on fluid-contacting parts 25 of the afore-mentioned body 2 and diaphragm 3.