

ABSTRACT

A mechanical seal device 1 in which, between a processing equipment 2 where to perform processing under a sterile condition and a rotary shaft 4 used with its one end inserted in the processing equipment 2 from an atmosphere side, seal parts 20 are disposed outside the processing equipment 2 at least at two places along a length direction of the rotary shaft 4 from the processing equipment side 2 toward the atmosphere side seals the rotary shaft 4, and when the inside of the processing equipment 2 and the seal parts 20 are sterilized, the atmosphere-side seal part 20 is also easily and surely sterilized similarly to the other seal part 20.

An airtight area 30 is provided on an atmosphere side of an atmosphere-side seal part 20 so that an area communicating with the atmosphere-side seal part 20 is kept airtight all along a circumferential direction of a rotary shaft 4, and sterilizing gas supplied to a sealing fluid supplied area 22, which is an area between the rotary shaft 4 and a device main body 21 of the mechanical seal device 1, in order to sterilize the seal parts 20 is retained in the airtight area 30.