CLAIMS

[Claim 1]

A fluid purification system comprising:

a centrifugal separator which separates minute matters, contained in a fluid, by centrifugal force; and

a filter device which removes remaining minute matters separated by the centrifugal separator, wherein

the centrifugal separator comprises

a body container which supplies a fluid containing minute matters from a fluid inlet to form a vortex, moves the minute matters outward by centrifugal force to separate the minute matters, discharges the fluid, used for separating the minute matters, from a fluid outlet, and settles the separated minute matters,

a minute matter discharge portion which discharges to the outside minute matters settled in a bottom portion of the body container, and

a guide cylindrical portion which is arranged at an axial center position of the body container and guides the fluid used for separating the minute matters to the fluid outlet,

the filter device comprises

a filtering chamber for filtering a liquid, wherein

the filtering chamber has

a filtering portion in which a plurality of filter pieces constituted of the guide cylindrical portion are accumulated to filter the liquid and

a cleaning portion in which the plurality of filter pieces constituted of a liquid discharge portion connected to the fluid outlet and having a volume larger than a volume of the guide cylindrical portion are dispersed to be cleaned and comprises

moving means which moves the plurality of filter pieces between the filtering portion and the cleaning portion,

the plurality of filter pieces are accumulated in the filtering portion to filter the liquid, and

the plurality of filter pieces are dispersed in the cleaning portion to be cleaned.

[Claim 2]

The fluid purification system according to claim 1, wherein the fluid inlet is arranged displaced to the minute matter discharge portion by the guide cylindrical portion.

[Claim 3]

The fluid purification system according to claim 1, further comprising stirring means which performs stirring when the plurality of filter pieces are dispersed to be cleaned.

CLAIMS

[Claim 1]

A fluid purification system comprising:

a centrifugal separator which separates minute matters, contained in a fluid, by centrifugal force; and

a filter device which removes remaining minute matters separated by the centrifugal separator, wherein

the centrifugal separator comprises

a body cylindrical container which supplies a fluid containing minute matters from a fluid inlet to form a vortex, moves the minute matters outward by centrifugal force to separate the minute matters, and settles the separated minute matters, and

a minute matter discharge portion which discharges to the outside minute matters settled in a bottom portion of the body cylindrical container,

the filter device comprises

a filtering chamber for filtering a liquid, wherein

the filtering chamber has

a filtering portion, arranged in the body cylindrical container along a cylindrical axial center direction, in which a plurality of filter pieces are accumulated to filter the liquid and

a cleaning portion, arranged outside of the body cylindrical container, in which the plurality of filter pieces connected to a fluid outlet and having a volume

larger than a volume of the filtering portion are dispersed to be cleaned, and comprises

moving means which moves the plurality of filter pieces between the filtering portion and the cleaning portion, wherein

at the time of fluid purification,

the plurality of filter pieces are accumulated in the filtering portion to filter a supplied liquid, the filtered liquid is guided to the fluid outlet via the cleaning portion, and fluid purification is performed, and

at the time of device cleaning,

the plurality of filter pieces are dispersed in the cleaning portion to clean the plurality of filter pieces by a supplied liquid, the liquid is guided to the fluid outlet, and device cleaning is performed.

[Claim 2]

The fluid purification system according to claim 1, wherein the fluid inlet is arranged at a position opposite to the filtering portion.

[Claim 3]

The fluid purification system according to claim 1, further comprising stirring means which performs stirring when the plurality of filter pieces are dispersed to be cleaned.