CLAIMS

[Claim 1] An electrolysis apparatus used in a circulation-type water treatment system including a rearing tank in which rearing water containing salt is stored, the circulation-type water treatment system being configured to treat the rearing water while circulating the rearing water from the rearing tank, and return the treated rearing water to the rearing tank,

the electrolysis apparatus comprising an electrolysis section configured to perform electrolysis of the rearing water in a region in which the rearing water is stored or flows, thereby generating a chloric acid compound, so that the generated chloric acid compound reacts with ammonia or ammonium ions in the rearing water, thereby decomposing ammonia or ammonium ions in the rearing water, wherein

the electrolysis section includes

an electrode section including a first electrode and a second electrode located in the region, and

a voltage application section configured to apply voltage between the first electrode and the second electrode,

the electrolysis apparatus further comprises

an electrolysis tank configured such that the rearing water is stored or flows therein,

a guide section configured to guide and collect deposits falling from the electrode section in the electrolysis tank, toward a predetermined position in the electrolysis tank, and

a discharge section including a pipe through which the deposits are discharged,

inside of the electrolysis tank is the region,

the voltage application section switches between a first state of performing the electrolysis in the region while applying voltage with the first electrode as an anode and the second electrode as a cathode, and a second state of applying voltage with the second electrode as an anode and the first electrode as a cathode,

the electrolysis tank includes a guide path configured to guide water present at a higher position than a predetermined height in the electrolysis tank to outside of the

electrolysis tank without guiding water present at a lower position than the predetermined height to outside of the electrolysis tank,

the predetermined height is a higher position than a lower end of the electrode section, and

the discharge section is configured to take the deposits into the pipe at a lower position than the electrode section and discharge the deposits from the electrolysis tank through the pipe.

[Claim 2] The electrolysis apparatus according to claim 1, wherein

the electrode section includes an electrode holding portion holding the first electrode and the second electrode, and the first electrode, the second electrode, and the electrode holding portion are integrally formed,

the circulation-type water treatment system is provided with an electrolysis tank configured such that the rearing water is stored or flows therein, and inside of the electrolysis tank is the region, and

the integrally formed electrode section is attachable and detachable to and from the electrolysis tank.

[Claim 3] The electrolysis apparatus according to claim 1 or 2, further comprising an electrolysis tank configured such that the rearing water is stored or flows therein, wherein

inside of the electrolysis tank is the region,

the electrode section is located on a water surface side of the rearing water in the electrolysis tank, and

the electrolysis apparatus further comprises a water flow generation section configured to cause the rearing water introduced into the electrolysis tank from outside of the electrolysis tank to flow so as to rise from a lower side to an upper side of the electrode section in the electrolysis tank.

[Claim 4] The electrolysis apparatus according to claim 1 or 2, wherein

the voltage application section regularly switches between an operation of performing electrolysis of the rearing water while continuing the first state and an

operation of performing electrolysis of the rearing water while continuing the second state.

[Claim 5] A circulation-type water treatment system comprising:

the electrolysis apparatus according to claim 1 or 2;

a removal section configured to remove at least solids in a first region in which the rearing water sent from the rearing tank is stored or flows;

the electrolysis section configured to perform the electrolysis of the rearing water in a second region which is the region in which the rearing water having passed through the first region is stored or flows; and

an activated carbon section configured to remove at least residual chlorine by activated carbon in a third region in which the rearing water having passed through the second region is stored or flows.

[Claim 6] A circulation-type water treatment system comprising:

the electrolysis apparatus according to claim 1 or 2;

the electrolysis tank; and

a reaction tank configured such that the rearing water discharged from the electrolysis tank is stored or flows in the reaction tank, wherein

inside of the electrolysis tank is the region,

the electrolysis tank includes a first guide path configured to guide water present at a higher position than a first height in the electrolysis tank to outside of the electrolysis tank without guiding water present at a lower position than the first height to outside of the electrolysis tank, and

the reaction tank includes a second guide path configured to guide water present at a higher position than a second height in the reaction tank to outside of the reaction tank without guiding water present at a lower position than the second height to outside of the reaction tank.