Claims

1. A ballast water management (BWM) system fluidly connectable to a ballast tank of a ship, comprising:

a chlorination system comprising an electrolyzer configured to generate a chlorine-based biocide to be introduced into ballast water;

a first controller configured to regulate operation of the electrolyzer;

a dechlorination system fluidly connected downstream from the ballast tank, the dechlorination system comprising a source of neutralizing agent selected to reduce the chlorine-based biocide in ballast water to be discharged from the ship;

an oxidation-reduction potential (ORP) sensor configured to determine an ORP value of the ballast water to be discharged;

a second controller configured to regulate addition of the neutralizing agent to the ballast water to be discharged in at least one of a first dechlorination mode, and a second dechlorination mode,

wherein the second controller regulates addition of the neutralizing agent in the first dechlorination mode if the ORP value of the ballast water to be discharged is less than a target ORP value,

wherein the second controller regulates addition of the neutralizing agent in the second dechlorination mode if the ORP value of the ballast water to be discharged is greater than or equal to the target ORP value,

wherein the target ORP value is less than about 200 mV.