【CLAIMS】

【Claim 1】

A silt curtain for water quality management of a water intake facility adjacent thereto, the silt curtain comprising:

a plurality of piles inserted vertically into subsea ground to a give depth in such a manner as to be spaced apart from each other by a given distance;

buoys adapted to connect the piles to each other in such a manner as to be moved in longitudinal directions of the piles according to a level of seawater;

a silt screen fixedly connected to the piles in vertical directions to the piles in such a manner as to block floating matters of seawater; and

a weight located on the lower end of the silt screen to apply load to the silt screen,

wherein a length of the silt screen is longer than a depth of mean low water spring MLWS, and through the movements of the buoys according to the level of seawater, a water flow section is formed above or under the silt screen on high tide, while the water flow section is being blocked on low tide,

wherein an upper end of the silt screen is fixed to given positions of the piles so that the length of the silt screen is longer than the depth of the mean low water spring MLWS, a floating matter silt screen is disposed on lower ends of the buoys in such a manner as to have a length lower than the length of the silt screen and to block fine floating matters attachedly moving along the surface of seawater, while the buoys are being not connected to the silt screen, and the water flow section is formed above the silt screen in such a manner as to be adjusted in width according to the movements of the buoys caused by the level of seawater.

【Claim 2】

A silt curtain facility for water quality management of a water intake facility adjacent thereto, the silt curtain facility comprising:

a blocking section disposed between the water intake facility and a pollution source to block floating matters from seawater and the pollution source;

a water flow section formed of the silt curtain according to claim 1 and disposed on the opposite side to the blocking section with respect to the water intake facility to allow the seawater to be introduced thereinto on high tide; and

a guide section protruding vertically from the end portion of the water flow section to guide the seawater introduced into the water flow section,

wherein the blocking section and the water flow section are formed to surround the water intake facility.

【Claim 3】

A method for constructing a silt curtain according to claim 1, the method comprising:

the seawater flow modeling step of performing seawater flow modeling on a water intake facility and an area adjacent to a reclaimed section to collect current direction information and tide information;

the floating matter dispersion analysis step of performing modeling for pollution sources and floating matters through the current direction information to analyze dispersion directions of the floating matters;

the water flow section design step of determining the positions and directions of a blocking section silt curtain

and a water flow section silt curtain on the basis of the current direction information and the floating matter dispersion directions;

the water flow section width design step of determining a width of a water flow section on the basis of the tide information;

the silt curtain verification step of verifying the silt curtain on the basis of the positions and directions of the blocking section silt curtain and the water flow section silt curtain and the width of the water flow section; and

the silt curtain construction step of constructing the silt curtain on the basis of the verified positions and directions of the blocking section silt curtain and the water flow section silt curtain and the verified width of the water flow section.

【Claim 4】

The method according to claim 3, wherein at the water flow section design step, if the main current direction is horizontal or vertical to the coast, the longitudinal direction of the water flow section is horizontal to the main current direction, and if the main current direction is at an acute angle to the coast, the longitudinal direction of the water flow section is vertical to the main current direction.

【Claim 5】

The method according to claim 3, wherein at the water flow section design step, the water flow section comprises a first silt curtain where the water flow section is formed under the silt screen and a second silt curtain where the water flow section is formed above the silt screen, and the first silt

curtain and the second silt curtain are continuously installed in the main current direction.