WHAT IS CLAIMED IS:

1. A method of pumping and discharging soil for reclamation, in which dry or semi-dry soil is vacuum-sucked in a mixture form from a water-adding hole, forcibly formed in a handling vessel anchored at a certain shore or coastal point where it facilitates to be loaded with the soil, and is conveyed in a one-step manner through a release hose extending to a specific reclaimable marine point remote from the handling vessel, so that the soil is continuously spread on a reclamation site for reclamation;wherein a suction/release device is further used, which consists of a suction unit configured to forcibly vacuum-suck the mixture and a release unit configured to continuously spread the sucked mixture;

wherein anchoring the handling vessel, consisting of a hopper barge and an auxiliary barge, at the specific shore or coastal point where it facilitates to be loaded with the soil, and coupling the suction unit, configured to vacuum-suck the soil, to a tip of an adjustment device mounted on the auxiliary barge;

forcibly jetting, by dispensing water onto a local portion of the soil loaded on the hopper barge to form the water-adding hole and simultaneously perform a water-adding

process,

vacuum-sucking, by the suction unit, the mixture of the water and the soil from the water-adding hole formed in the local portion of the soil to gradually exhaust the soil loaded on the hopper barge,

conveying the sucked mixture through the release hose extending to the reclaimable marine point remote from the handling vessel to release the mixture through the release unit connected to the end of the release hose, so that the soil is spread on the reclamation site; and

replenishing the soil as much as the exhausted amount of the soil in the hopper barge when the soil loaded on the hopper barge is sucked and exhausted by the suction unit, the replenished soil being supplied through a conveyer belt from soil-loaded replenishment vessels waiting in the vicinity of the hopper barge; wherein the mixture is made by mixing at the rate of the water of 50 m^3 to 90 m^3 with the soil of 10 m^3 to 50 m^3;

wherein a video camera is installed in the vicinity of a water supply pipe and a jet injection nozzle around the suction unit of a suction/release device to monitor the shape of the inclined wall of the soil, and the amount and angle of the water injection is controlled in real time for the efficient formation of the water-adding hole;

wherein the floating amount of the soil mixed with the water may be measured and checked by a turbidity measuring instrument;

wherein a density meter is installed at the certain point of the length of the release hose so as to monitor, in real time, whether the mixture (water + soil) is conveyed in an amount corresponding to a threshold.

2. An apparatus for pumping and discharging soil for reclamation, in which a water-adding hole configured to change dry or semi-dry soil into a mixture is forcibly formed in a handling vessel anchored at a certain shore or coastal point where it facilitates to be loaded with the soil and is remote from a specific reclaimable marine point, so that the mixture is vacuum-sucked from the water-adding hole by a suction unit to be conveyed in a one-step manner through a release hose extending to the marine point from the handling vessel, and is continuously spread on a reclamation site from a release unit connected to the end of the release hose for reclamation;

wherein the handling vessel consisting of a hopper barge and an auxiliary barge, the hopper barge being loaded with the soil and anchored at the certain shore or coastal point where it facilitates to be loaded with the soil and

is remote from the marine point, the auxiliary barge being equipped with an adjustment device coupled with the suction unit disposed on one side of the hopper barge to vacuum-suck and exhaust the soil loaded on the hopper barge; and

a suction/release device comprising the suction unit and the release unit, the suction unit being coupled to a tip of the adjustment device to forcibly form the water-adding hole in a local portion of the soil loaded on the hopper barge while performing water-adding and vacuum-sucking the mixture of the water and the soil from the water-adding hole using a centrifugal pump, and the release unit being connected to the end of the release hose to release the mixture so that the soil is continuously spread on the reclamation site;

wherein the mixture is made by mixing at the rate of the water of $50m^3$ to $90m^3$ with the soil of $10m^3$ to $50m^3$;

wherein a video camera is installed in the vicinity of a water supply pipe and a jet injection nozzle around the suction unit of a suction/release device to monitor the shape of the inclined wall of the soil, and the amount and angle of the water injection is controlled in real time for the efficient formation of the water-adding hole;

wherein the floating amount of the soil mixed with the water may be measured and checked by a turbidity measuring

instrument;

wherein a density meter is installed at the certain point of the length of the release hose so as to monitor, in real time, whether the mixture (water + soil) is conveyed in an amount corresponding to a threshold.

3. The apparatus of claim 2,

wherein the suction unit is the cylindrical centrifugal pump that has a suction head coupled to the lower end of a cylindrical housing thereof to vacuum-suck the mixture from the water-adding hole, and the suction head having a flat and wide bottom to allow a vacuum suction area to be easily secured;

the centrifugal pump is directly coupled to the adjustment device to exhaust the soil while precisely moving;

the adjustment device is an excavator and the centrifugal pump is directly coupled to the end of the boom of the excavator;

the centrifugal pump further comprising:

the water supply pipe formed on one outer side of the cylindrical housing of the centrifugal pump to supply water,

the jet injection nozzle formed on one inner side of the cylindrical housing of the centrifugal pump to jet

water,

a valve device configured to selectively use the water supply pipe and the jet injection nozzle,

a discharge/connection pipe formed on another outer side of the cylindrical housing of the centrifugal pump to supply the sucked mixture to the release hose, andan air relief ball valve formed on another outer side of the cylindrical housing of the centrifugal pump to discharge bubbles, caused by generation of air during the suction of the mixture.

4. The apparatus of claim 2, wherein the release unit comprises:

a release/distribution discharge pipe connected to the end of the release hose and having a plurality of outlets spaced at regular intervals, to distribute and release the mixture sucked from the suction unit so that the mixture is spread on the reclamation site, in which case the soil is evenly distributed and released through the plurality of outlets and is uniformly spread on the reclamation site; or

on the other hand, a release/distribution discharge pipe having a single outlet, in which case the soil is released through the single outlet and is generally spread, namely, non-uniformly spread on the reclamation site.

5. The apparatus of claim 4, further comprising a buoyancy adjustment device movably connected to the adjacent release hose of the release/distribution discharge pipe to easily handle the release/distribution discharge pipe while the mixture is spread on the reclamation site, the buoyancy adjustment device being configured to properly adjust the buoyancy of the release/distribution discharge pipe.

6. The apparatus of claim 5, wherein the buoyancy adjustment device further comprises:

a pontoon as a floating structure, the pontoon consisting of the first and second pontoons formed respectively at both ends thereof;

a GPS installed in the pontoon and configured to communicate with a satellite and locate the release/distribution discharge pipe;

a control unit installed in the pontoon and configured to instruct a winch to wind coils around the first and second pontoons by locating the release/distribution discharge pipe in response to the signal transmitted from a GPS and to control movement of the pontoon in the direction of a new location coordinate value of the GPS; and

an infrared camera configured to monitor the thickness of the spread layer of the soil on the reclamation site and generate an image data.

7. The apparatus of claim 2, wherein a plurality of vibration motors is installed on the back surface of the loading chamber of the hopper barge, and the masses of the soil attached to a loading chamber are pulverized and dropped by the vibration transmitted through the operation of the plurality of the vibration motors.