become apparent from the subsequent detailed description and the appended claims, taken in conjunction with the accompanying drawings and this background of the disclosure.

Summary of Invention

A first aspect of the present invention provides a modular fluid processing tank comprising a body having a plurality of vertical walls, wherein each of at least two opposing walls comprises a respective fluid connector, ~~the~~ each fluid connector being configured to engage directly with a corresponding fluid connector of an adjacent tank such that the tank fluidly communicates with said adjacent tank and wherein each fluid connector is in fluid communication with a corresponding network pipe running inside the body between the two opposing walls.

The fluid connector may comprise a quick-coupling connector.

The fluid connector may be connected to an integrated valve.

The integrated valve may comprise one of a group consisting of a pneumatically actuated valve, a hydraulically actuated valve and an electromechanically actuated valve.

The integrated valve may be remotely controllable.

~~The fluid connector may be in fluid communication with a corresponding network pipe running inside the body between the two opposing walls.~~

The tank may comprise a plurality of internal pipes, the plurality of internal pipes being in fluid communication with each other and coupled to the corresponding network pipe.

The tank may comprise a suction cavity disposed at a base of the tank, the suction cavity being in fluid communication with the plurality of internal pipes.

The tank may further comprise a fluid agitator disposed inside the body and configured to mix the fluid.

The fluid agitator may comprise a rotatable propeller configured to mix the fluid.

The tank may further comprise a plurality of reinforcement members disposed along the walls.

The tank may be compliant with ISO 1496 standard.

The tank may be compliant with DNV 2.7-1 standard.

The tank may further comprise a fluid level detector.

The tank may comprise a self-cleaning tank.

A fluid processing plant may comprise a plurality of tanks of the first aspect of the present invention, the plurality of tanks being connected adjacent to each other.

A second aspect of the present invention provides a method of manufacturing a modular fluid processing tank, the method comprising the steps of forming a body, the body having a plurality of vertical walls, ~~and~~ affixing a fluid connector on each of at least two opposing walls having corresponding holes formed therein, and connecting a corresponding network pipe inside the body between the fluid connectors on the at least two opposing walls, wherein ~~the~~ each fluid connector is configured to engage directly with a corresponding fluid connector of an adjacent tank such that the tank fluidly communicates with said adjacent tank.

Providing the fluid connector may comprise providing a quick-coupling fluid connector.

Providing the fluid connector may comprise providing the fluid connector connected to an integrated valve.

The integrated valve may comprise one of a group consisting of a pneumatically actuated valve, a hydraulically actuated valve and an electromechanically actuated valve.

The integrated valve may be a remotely controllable valve.

~~The method may further comprise connecting a corresponding network pipe inside the body between the fluid connectors on the at least two opposing walls.~~

The method may further comprise connecting a plurality of internal pipes between the plurality of walls, the plurality of internal pipes being in fluid communication with each other; and coupling the plurality of internal pipes to the corresponding network pipe.

The method may further comprise forming a suction cavity at a base of the tank, the suction cavity being in fluid communication with the plurality of internal pipes.

The method may further comprise forming a suction cavity at a base of the tank, the suction cavity being in fluid communication with the plurality of internal pipes.

The method may further comprise installing a fluid agitator inside the body, the fluid agitator configured to mix the fluid.

Installing the fluid agitator may comprise installing a rotatable propeller configured to mix the fluid.

Forming the body may comprise affixing a plurality of reinforcement members along the walls.

Forming the body may comprise forming the body to comply with ISO 1496 standard.

Claims

1. A modular fluid processing tank comprising:

a body having a plurality of vertical walls, wherein each of at least two opposing walls comprises a respective fluid connector, ~~the~~ each fluid connector being configured to engage directly with a corresponding fluid connector of an adjacent tank such that the tank fluidly communicates with said adjacent tank; and wherein each fluid connector is in fluid communication with a corresponding network pipe running inside the body between the two opposing walls.

2. The modular fluid processing tank of claim 1, wherein each ~~the~~ fluid connector comprises a quick-coupling connector.

3. The modular fluid processing tank of claim 1 or 2, wherein each ~~the~~ fluid connector is connected to an integrated valve.

4. The modular fluid processing tank of claim 3, wherein the integrated valve comprises one of a group consisting of a pneumatically actuated valve, a hydraulically actuated valve and an electromechanically actuated valve.

5. The modular fluid processing tank of claim 3 or 4, wherein the integrated valve is remotely controllable.

~~6. The modular fluid processing tank of any one of claims 1 to 5, wherein the fluid connector is in fluid communication with a corresponding network pipe running inside the body between the two opposing walls.~~

~~7~~6. The modular fluid processing tank of claim ~~6~~1, wherein the tank comprises a plurality of internal pipes, the plurality of internal pipes being in fluid communication with each other and coupled to the corresponding network pipe.

~~8~~7. The modular fluid processing tank of claim ~~7~~6, wherein the tank further comprises a suction cavity disposed at a base of the tank, the suction cavity being in fluid communication with the plurality of internal pipes.

~~9~~8. The modular fluid processing tank of any one of claims 1 to ~~8~~7, further comprising a fluid agitator disposed inside the body and configured to mix the fluid.

~~10~~9. The modular fluid processing tank of claim ~~9~~8, wherein the fluid agitator comprises a rotatable propeller configured to mix the fluid.

~~11~~10. The modular fluid processing tank of any one of claims 1 to ~~10~~9, further comprising a plurality of reinforcement members disposed along the walls.

~~12~~11. The modular fluid processing tank of any one of claims 1 to ~~11~~10, wherein the tank is compliant with ISO 1496 standard.

~~13~~12. The modular fluid processing tank of any one of claims 1 to ~~12~~11, wherein the tank is compliant with DNV 2.7-1 standard.

~~14~~13. The modular fluid processing tank of any one of claims 1 to ~~13~~12, further comprising a fluid level detector.

~~15~~14. The modular fluid processing tank of any one of claims 1 to ~~14~~13, wherein the tank comprises a self-cleaning tank.

~~16~~15. A fluid processing plant, comprising a plurality of tanks as claimed in any one of claims 1 to ~~15~~14, the plurality of tanks being connected adjacent to each other.

~~17~~16. A method of manufacturing a modular fluid processing tank, the method comprising the steps of:

forming a body, the body having a plurality of vertical walls; ~~and~~

affixing a fluid connector on each of at least two opposing walls having corresponding holes formed therein; and

connecting a corresponding network pipe inside the body between the fluid connectors on the at least two opposing walls;

wherein each ~~the~~ fluid connector is configured to engage directly with a corresponding fluid connector of an adjacent tank such that the tank fluidly communicates with said adjacent tank.

~~18~~17. The method as claimed in claim ~~17~~16, wherein providing each ~~the~~ fluid connector comprises providing a quick-coupling fluid connector.

~~19~~18. The method as claimed in claim ~~17~~16 or ~~18~~17, wherein providing each ~~the~~ fluid connector comprises providing the fluid connector connected to an integrated valve.

~~20~~19. The method as claimed in claim ~~19~~18, wherein the integrated valve comprises one of a group consisting of a pneumatically actuated valve, a hydraulically actuated valve and an electromechanically actuated valve.

~~21~~20. The method as claimed in claim ~~19~~18 or ~~20~~19, wherein the integrated valve is a remotely controllable valve.

~~22. The method as claimed in any one of claims 17 to 21, further comprising connecting a corresponding network pipe inside the body between the fluid connectors on the at least two opposing walls.~~

~~23~~21. The method as claimed in claim ~~22~~16, further comprising:

connecting a plurality of internal pipes between the plurality of walls, the plurality of internal pipes being in fluid communication with each other; and

coupling the plurality of internal pipes to the corresponding network pipe.

~~24~~22. The method as claimed in claim ~~23~~21, further comprising forming a suction cavity at a base of the tank, the suction cavity being in fluid communication with the plurality of internal pipes.

~~25~~23. The method as claimed in any one of claims ~~17~~ 16 to ~~24~~22, further comprising installing a fluid agitator inside the body, the fluid agitator configured to mix the fluid.

~~26~~24. The method as claimed in claim ~~25~~23, wherein installing the fluid agitator comprises installing a rotatable propeller configured to mix the fluid.

~~27~~25. The method as claimed in any one of claims ~~17~~ 16 to ~~26~~24, wherein forming the body comprises affixing a plurality of reinforcement members along the walls.

~~28~~26. The method as claimed in any one of claims ~~17~~ 16 to ~~27~~25, wherein forming the body comprises forming the body to comply with ISO 1496 standard.

~~29~~27. The method as claimed in any one of claims ~~17~~ 16 to ~~28~~26, wherein forming the body comprises forming the body to comply with DNV 2.7-1standard.

~~30~~28. A method of storing a fluid, the method comprising the steps of:

connecting a plurality of modular fluid processing tanks as claimed in any one of claims 1 to ~~16~~ 15 such that the tanks are adjacent; and

transporting the fluid in or out of a selected tank of the plurality of tanks by moving the fluid through at least one tank adjacent to said selected tank.

~~31~~29. The method as claimed in claim ~~30~~28, further comprising the step of remotely monitoring fluid levels in the plurality of tanks.