CLAIMS:

1. A desanding device for removing at least particulates from a multiple-phase fluid stream containing at least gas, liquid and entrained particulates, the desanding device comprising:

a vessel forming a treatment chamber and a recovery chamber, the treatment chamber having a fluid inlet for receiving the fluid stream adjacent an upper portion thereof and collecting particulates at a lower portion thereof, the treatment chamber further comprising a top wall and bottom wall, said bottom wall having a non-zero angle of inclination with respect to a horizontal plane; and the recovery chamber comprising a conduit fluidly connected to the treatment chamber,

the conduit having

a first upper port formed through the conduit and in fluid communication with the upper portion of the treatment chamber for receiving gas therefrom,

a second lower port formed through the conduit and in fluid communication with the lower portion of treatment chamber for receiving liquid therefrom, the second lower port at an elevation below the first upper port, and

a fluid outlet, at an elevation intermediate the first upper and second lower ports and at an elevation lower than the fluid inlet, for discharging a particulate-free gas and a particulate-free liquid.

2. The desanding device of claim 1, wherein the fluid inlet extends adjacent to or along the bottom wall of the vessel and the second lower port is along the

top wall.

3. The desanding device of claim 1 or 2, wherein the conduit comprises a baffle in the vessel that divides the vessel into the treatment chamber and the recovery chamber, the first upper port and the second lower port formed through the baffle.

4. The desanding device of claim 3, wherein the fluid outlet extends downwardly into the recovery chamber to an elevation intermediate the first upper port and the second lower port.

5. The desanding device of any one of claims 1 to 4, wherein the conduit is located within the vessel.

6. The desanding device of claim 1 or 2, wherein the recovery chamber is external to the vessel.

7. The desanding device of claim 6, wherein the conduit comprises a vertically oriented conduit portion extending upwardly from the second lower port and to the fluid outlet.

8. The desanding device of any one of claims 1 to 7, wherein a cross-sectional area of the recovery chamber is smaller than a cross-sectional area of the treatment chamber.

9. The desanding device of any one of claims 1 to 8, wherein a freeboard interface is formed in the recovery chamber and the treatment chamber at about the elevation of the fluid outlet.

10. The desanding device of any one of claims 1 to 9, wherein the treatment chamber further comprises a flow barrier between the fluid inlet and the first upper port for directing the fluid stream thereabout.

11. The desanding device of any one of claims 1 to 10, wherein the treatment chamber further comprises a particulate drain for removing particulate from the lower portion of the treatment chamber.

12. The desanding device of claim 11, wherein the particulate drain is sandwiched between an inlet valve and a discharge valve.

13. The desanding device of claim 12, further comprising a particulate detector to detect particulate accumulation in the sand accumulation chamber through the inlet valve and to periodically open and close the particulate drain.

14. The desanding device of claim 12 or 13, wherein the inlet and discharge valves are controlled automatically with a timer or a particulate detector to periodically open and close the particulate drain.

15. The desanding device of any one of claims 1 to 14, wherein the bottom wall of the treatment chamber is at an angle of inclination at or greater than an angle of repose of the particulates accumulated therein.

16. A device for removing at least particulates from a multiple-phase fluid stream containing gas, liquid and entrained particulates comprising:

a fluid inlet at an upper portion of a vessel for receiving the fluid stream, the fluid inlet extending into the vessel to a discharge end;

a gas outlet at the upper portion of the vessel, the gas outlet at an elevation at or above the fluid inlet's discharge end;

a liquid outlet from the vessel; and

a shroud within the vessel, the shroud comprising a conduit forming a treatment chamber within, and a recovery chamber between the conduit and the vessel, the vessel further comprising a bottom wall along the recovery chamber and the treatment chamber, the bottom wall being inclined, having a non-zero angle of inclination with respect to a horizontal plane;

the treatment chamber having an upper opening in fluid communication with the upper portion of the recovery chamber of the vessel and a lower opening in fluid communication with a lower portion of the recovery chamber at an elevation below the liquid outlet, the upper opening receiving the fluid inlet therein with the fluid inlet's

discharge end within the conduit intermediate the upper and lower openings, the fluid inlet forming a shroud annulus at the upper opening between the fluid inlet and the conduit, and

the conduit receiving the fluid stream from the discharge end of the fluid inlet into the treatment chamber and flowing gas out of the treatment chamber through the shroud annulus, out of the upper opening, and into the upper portion of the vessel for discharge through the gas outlet, and flowing liquid and particulates out of the treatment chamber through the lower opening for settling the particulates along the inclined bottom wall at the lower portion of the recovery chamber, the liquid flowing to the liquid outlet.

17. The device of claim 16, wherein the conduit extends adjacent to or along the inclined bottom wall of the vessel and the liquid outlet is along a top wall of the vessel.

18. The device of claim 16 or 17 further comprising a fluid outlet, the fluid outlet comprising at least the liquid outlet, the fluid outlet being at an elevation lower than the discharge end of the fluid inlet.

19. The device of claim 16, 17 or 18, wherein the liquid outlet is spaced from the gas outlet and at an elevation therebelow, the device further comprising a liquid level controller for controlling a liquid level at about or below a discharge end of the fluid inlet.

20. The device of claim 19, wherein a freeboard interface is formed in the recovery chamber and in the treatment chamber at the liquid level.

21. The device of claim 20, wherein the fluid inlet extends to an elevation within the vessel such that a discharge end of the fluid inlet is at about the freeboard interface.

22. The device of claim 21, wherein the particulate drain is located in the lower portion of the recovery chamber at a lower portion of the vessel.

23. The device of claim 16, wherein:

the recovery chamber has a first upper port in fluid communication with the conduit's upper opening for receiving gas therefrom, a second lower port in fluid communication with the conduit's lower opening, and a fluid outlet intermediate the first upper port and the second lower port for discharging at least particulate-removed gas.

24. The device of claim 23, wherein the fluid outlet is a liquid/gas outlet for both the liquid outlet and the gas outlet.

25. The device of claim 23 or 24, wherein the conduit of the recovery chamber is external to the vessel and in fluid communication with the treatment chamber via the first upper port and second lower port.

26. The device of any one of claims 23, 24 or 25, wherein a freeboard interface between liquid and gas is formed in the recovery chamber and in the treatment chamber at the elevation of the fluid outlet.

27. The device of claim 26, wherein the fluid inlet extends to an elevation within the vessel such that a discharge end of the fluid inlet is at about the freeboard interface.

28. The device of any one of claims 16 to 27, wherein the vessel further comprises a particulate drain for removing particulates from said recovery chamber.

29. The device of claim 28, wherein the particulate drain comprises a horizontally-oriented body.

30. The device of claim 28 or 29, wherein the particulate drain is located at the lower portion of the vessel.

31. The device of any one of claims 16 to 30, wherein the bottom wall of the vessel is at an angle of inclination at or greater than an angle of repose of the particulates settling therealong.