Claims

1. A method of providing a deluge system on a boom, the deluge system comprising a base unit, a stanchion, and a nozzle apparatus; the method comprising attaching the deluge system to a burner boom with a walkway, such that there remains a width of at least 30cm clear with on the boom's walkway width after the deluge system has been attached.

2. A method as claimed in claim 1, wherein there remains a width of at least 50cm clear on the boom's walkway width after the deluge system has been attached.

3. A method as claimed in claim 2, wherein there remains a width of at least 65cm clear on the boom's walkway width after the deluge system has been attached.

4. A method as claimed in any one of claims 1 to 3, wherein the deluge system is placed over pipework on the boom.

5. A method as claimed in any one of claims 1 to 4, wherein the deluge system is attached to the boom outboard of handrail supports of the boom walkway.

6. A method as claimed in any one of claims 1 to 5, wherein the deluge system comprises a mechanism for moving the stanchion from a stowed position to an operative position.

7. A deluge system comprising a base unit, a stanchion moveably attached to the base unit, a nozzle apparatus attached to the stanchion and a mechanism for moving the stanchion from a stowed position to an operative position.

8. A deluge system as claimed in claim 7, wherein the moveable member is arranged to rotate by at least 89 degrees.

9. A deluge system as claimed in claim 8, wherein the moveable member is arranged to rotate by at least 100 degrees, optionally more than 170 degrees.

10. A deluge system as claimed in claim 9, wherein the moveable member is arranged to rotate by at least 270 degrees, optionally at least 360 degrees

11. A deluge system as claimed in any one of claims 7 to 10, wherein the moveable member is arranged to rotate in a second plane by at least 170 degrees.

12. A deluge system as claimed in any one of claims 7 to 11, wherein the mechanism for moving the stanchion comprises a winch mechanism.

13. A deluge system as claimed in any one of claims 7 to 12,wherein the mechanism for moving the stanchion comprises a gear mechanism.

14. A deluge system as claimed in any one of claims 7 to 13 wherein the base unit's width perpendicular to the plane defined by the movement of the stanchion, is less than 1m.

15. A deluge system as claimed in claim 14, wherein said width of the base unit is smaller than 75cm optionally smaller than 60cm.

16. A deluge system as claimed in any one of claims 7 to 15, wherein the deluge system comprises a filter between the inlet and the outlet to the stanchion and a first flow path is defined for particles too large for said filter and a second flow path is defined for particles small enough for said filter; and wherein a container is provided downstream of the first flow path.

17. A deluge system as claimed in claim 16, wherein there is a further container co-linear with the stanchion.

18. A deluge system as claimed in claim 16 or claim 17, wherein the container(s) comprise a removable portion.

19. A deluge system as claimed in claim 18, wherein the removable portion is removable by way of any one or more of a threaded connection, a snap fit connection, springs, clips and bolt & screw and is reattachable to the rest of the deluge system.

20. A deluge system as claimed in any one of claims 16 to 19, wherein the container is at least 20cm^3 optionally more than 50 cm^3 optionally more than 100 cm^3.

21. A deluge system as claimed in any one of claims 16 to 20, wherein the first flow path terminates in or above the container.

22. A deluge system as claimed in any one of claims 16 to 21, wherein the filter is a screen comprising at least one aperture therein such that the first flow path is for particles too large for said aperture and the second flow path is for particles small enough for said aperture.

23. A deluge system as claimed in claim 22, wherein the at least one aperture of the screen is linear in shape.

24. A deluge system as claimed in claim 22 or 23, wherein the screen is a tubular screen with a passage therein, and said at least one aperture thereon is on a face of the tubular screen.

25. A deluge system as claimed in any one of claims 22 to 24, wherein there are at least four apertures in the screen.

26. A deluge system as claimed in any one of claims 7 to 25, wherein a moveable member comprises the stanchion, the stanchion having an internal fluid channel and being suitable to attach a nozzle apparatus thereto; and the base unit comprises a connection mechanism, wherein the moveable member is rotationally attached to the connection mechanism at a connection point spaced away from an end of the moveable member.

27. A deluge system as claimed in claim 26, wherein the connection point is spaced away from the end of the moveable member by at least 10% of the moveable member's length, without nozzle apparatus, optionally by at least 20%.

28. A deluge system as claimed in claim 26 or claim 27, wherein the connection point is spaced away from the end of the moveable member by less than 40%.

29. A deluge system as claimed in any one of claims 26 to 28, wherein the moveable member has a nozzle end between said connection point and the end suitable for attaching a nozzle apparatus; and a counterweight end, between said connection point and the opposite end of the moveable member; and wherein said counterweight end weighs between 50 - 300 kg, optionally 100 – 200kg.

30. A deluge system as claimed in any one of claims 26 to 29, wherein the moveable member has a nozzle end between said connection point and the end suitable for attaching a nozzle apparatus; and a counterweight end, between said connection point and the opposite end of the moveable member; and wherein 20 – 40% of the combined weight of the moveable member and nozzle apparatus, is at the counterweight end of the moveable member.

31. A method of providing a deluge system on a boom as claimed in any one of claims 1 to 6, comprising using a deluge system as claimed in any one of claims 7 to 30.

32. A method comprising providing a deluge system as claimed in any in any one of claims 7 to 31, and creating a screen of water using the deluge system to mitigate heat transfer from a heat source.

33. A method as claimed in claim 32, wherein the heat source includes a well-flaring operation.

34. A method as claimed in claim 33, wherein the well-flaring operation is performed on an offshore vessel or platform.

35. A method as claimed in claim 34, wherein the connection mechanism is connected to a boom.

36. A method as claimed in claim 35, wherein the deluge system is provided outboard of handrail supports of the boom.

37. A method as claimed in claim 32, wherein the heat source includes a bushfire or forest fire.

38. A method as claimed in claim 32, wherein the heat source includes a flaming well blow-out.

Claims

1. A method of providing a deluge system on a burner boom comprising a walkway, the deluge system comprising a base unit, a stanchion, and a nozzle apparatus; wherein the stanchion is moveable from a stowed position to an operative position;
the method comprising attaching the deluge system to the burner boom adjacent the walkway, such that there remains a width of at least 30cm clear on the burner boom's walkway width after the deluge system has been attached.

2. A method as claimed in claim 1, wherein there remains a width of at least 50cm clear on the burner boom's walkway width after the deluge system has been attached.

3. A method as claimed in claim 2, wherein there remains a width of at least 65cm clear on the burner boom's walkway width after the deluge system has been attached.

4. A method as claimed in any one of claims 1 to 3, wherein the deluge system is placed over pipework on the burner boom.

5. A method as claimed in any one of claims 1 to 4, wherein the deluge system is attached to the burner boom outboard of handrail supports of the burner boom walkway.

6. A burner boom comprising a walkway and a deluge system, wherein the deluge system comprises a base unit, a stanchion attached to the base unit and moveable between a stowed position and an operative position, and a nozzle apparatus attached to the stanchion, wherein the deluge system is connected to the burner boom adjacent the walkway and the walkway is provided with a clearance width of at least 30cm.

7. A burner boom as claimed in claim 6, wherein the stanchion is configured to extend parallel to the walkway when the stanchion is in the stowed position.

8. A burner boom as claimed in any one of claims 6 or 7, wherein the stanchion (220, 320) is configured to move between an orientation in which the nozzle apparatus (222, 322) faces upwards and a further position in which the nozzle apparatus (222, 322) faces downwards.

9. A burner boom as claimed in any one of claims 6 to 8, wherein the stanchion is configured for rotation about perpendicular axes of rotation.

10. A burner boom as claimed in any one of claims 6 to 9, wherein a moveable member comprises the stanchion, the stanchion having an internal fluid channel and being suitable to attach the nozzle apparatus thereto;
and the base unit comprises a connection mechanism, wherein the moveable member is rotationally attached to the connection mechanism at a connection point spaced away from an end of the moveable member.

11. A burner boom as claimed in claim 10, wherein the moveable member has a nozzle end between said connection point and the end suitable for attaching a nozzle apparatus; and a counterweight end, between said connection point and the opposite end of the moveable member; and wherein said counterweight end weighs between 50 - 300 kg, and optionally 100 - 200kg.

12. A burner boom as claimed in any one of claims 10 or 11, wherein the moveable member has a nozzle end between said connection point and the end suitable for attaching a nozzle apparatus;
and a counterweight end, between said connection point and the opposite end of the moveable member; and wherein 20 - 40% of the combined weight of the moveable member and nozzle apparatus, is at the counterweight end of the moveable member.

13. A burner boom as claimed in any one of claims 6 to 12, wherein the walkway of the burner boom is provided with boom handrails and the deluge system is attached to the burner boom outboard of the boom handrails.

14. A burner boom as claimed in any one of claims 6 to 13, wherein the walkway is provided with a clearance width of at least 50cm along its length, and optionally the walkway is provided with a clearance width of at least 65cm along its length.

15. Use of the deluge system on the burner boom as claimed in any one of claims 6 to 14 to create a screen of water to mitigate heat transfer from a heat source.