

WE CLAIM:

1. A mobile fuel dispenser for carrying combustible liquid fuel and for dispensing the fuel during fuelling of a fuel tank of a vehicle located at a location remote from a fuel refilling station, the mobile fuel dispenser including:

a fuel dispensing nozzle for dispensing the fuel;

a primary containment tank for containing the fuel to be dispensed via the fuel dispensing nozzle;

a vapour recovery nozzle associated with the fuel dispensing nozzle, the vapour recovery nozzle being operable, in use, for recovering vapour from the fuel tank of the vehicle during fueling;

a sealing mechanism associated with the fuel dispensing nozzle and the vapour recovery nozzle and configured for sealingly engaging the fuel tank in an arrangement permitting substantially vapourless dispensing of the fuel by the dispensing nozzle and recovery of the vapour from the fuel tank via the vapour recovery nozzle;

a secondary containment tank;

a pressure release valve connected between the primary containment tank and the secondary containment tank and operable to decrease pressure within the primary containment tank during the recovery of vapour recovered by the vapour recovery nozzle and pumped into the primary containment tank, in use; and

a safety mechanism comprising at least one detector for detecting an undesirable operational parameter of the mobile fuel dispenser, the safety mechanism being operable to stop fuel dispensing in response to detection of said undesirable operational parameter.

2. The mobile fuel dispenser in claim 1, wherein the pressure release valve is operable to increase pressure within the primary containment tank, in use, during dispensing of fuel from the primary containment tank.
3. The mobile fuel dispenser in claim 1, wherein the pressure release valve is operable, in use, for releasing to the secondary containment tank, a pressure build-up in the primary containment tank resulting from recovery of vapour recovered by the vapour recovery nozzle.
4. The mobile fuel dispenser in claim 1 further comprising a fuel pump for pumping the fuel from the primary containment tank to the fuel dispensing nozzle.
5. The mobile fuel dispenser of claim 4 further comprising a vapour pump for pumping the vapour from the vapour recovery nozzle to the primary containment tank.
6. The mobile fuel dispenser of claim 5, wherein the safety mechanism comprises a control module configured for controlling operation of at least one of the fuel pump and the vapour recovery pump, in response to detection of said operational parameter by said at least one detector.
7. The mobile fuel dispenser of claim 6, wherein the undesirable operational parameter detected by the detector is a state of operation of the vapour pump and wherein the control module is configured to shut off the fuel pump in response to detection by the detector that the vapour pump is not in operation during fuel dispensing operations.
8. The mobile fuel dispenser of claim 6, wherein the detector is a pressure detector located in the secondary containment tank and the undesirable operational parameter which is detected by the pressure detector is a pressure in the secondary containment tank exceeding a particular pressure level and wherein the control module is configured to shut off the fuel pump and the vapour pump in response to detection by the pressure detector that the pressure in the secondary containment tank exceeds said particular pressure level.

9. The mobile fuel dispenser of claim 1 further comprising a pressure release valve for releasing pressurized vapour from the secondary containment tank to the atmosphere, for purging the vapour from the secondary containment tank.

10. The mobile fuel dispenser of claim 9 further comprising an additional pressure release valve for releasing pressurized vapour from the primary containment tank to the atmosphere, for purging the vapour from the primary containment tank.

11. The mobile fuel dispenser of claim 9, wherein the safety mechanism further comprises one or more sensors, each of the one or more sensor configured for sensing if the mobile fuel dispenser is in an at least partially enclosed area, the safety mechanism further configured to prevent operation of the one or more pressure release valve in response to detection by the one or more sensors that the mobile dispenser is in said at least partially enclosed area, and to allow operation of the one or more pressure release valve, in response to detection by one or more sensors that the mobile fuel dispenser is not in said at least partially enclosed area, thereby to substantially reduce the release of vapour in said at least partially enclosed area.

12. The mobile fuel dispenser of claim 11, wherein the one or more sensors are configured for detecting a speed of the mobile dispenser and the safety mechanism is configured to prevent operation of the one or more pressure release valve in response to detection by the one or more sensors that said speed is less than a particular speed.

13. The mobile fuel dispenser of claim 1, wherein the primary containment tank is wholly located within the secondary containment tank.

14. A method of dispensing combustible liquid fuel for fuelling of a fuel tank of a vehicle located at a location remote from a fuel refilling station, the method comprises:

providing a mobile fuel dispenser for carrying and dispensing the fuel, the mobile fuel dispenser including a fuel dispensing nozzle, a vapour recovery nozzle; a primary containment tank for containing the fuel to be dispensed; and a secondary containment tank;

sealingly engaging the fuel tank of the vehicle with the fuel dispensing nozzle and the vapour recovery nozzle;

dispensing fuel from the primary containment tank into the fuel tank of the vehicle via the fuel dispensing nozzle;

recovering vapour from the fuel tank via the vapour recovery nozzle and delivering the recovered vapour to the primary containment tank;

decreasing pressure within the primary containment tank by venting vapour from the primary containment tank into the secondary containment tank;

detecting an operational parameter of the mobile fuel dispenser; and

stopping fuel dispensing in response to detection of said operational parameter.

15. The method of claim 14 further comprises releasing pressurized vapour from the secondary containment tank to the atmosphere, for purging the vapour from the secondary containment tank.

16. The method of claim 14 further comprises controlling operation of at least one of fuel dispensing and vapour recovery in response to detection of said operational parameter.

17. The method of claim 14, wherein the step of stopping fuel dispensing is in response to at least one of detecting inadequate vapour recovery or detecting pressure in the secondary containment tank exceeding a particular pressure level.

18. The method of claim 14 further comprises releasing pressurized vapour from one of the primary containment tank or the secondary containment tank to the atmosphere, for purging the recovered vapour.

19. The method of claim 14 further comprising:
- sensing whether the mobile fuel dispenser is in an at least partially enclosed area or not;
 - preventing release of pressurized vapour to the atmosphere when the mobile fuel dispenser is in said at least partially enclosed area; and
 - allowing release of pressurized vapour to the atmosphere when the mobile fuel dispenser is not in said at least partially enclosed area.
20. The method of claim 19, wherein the step of sensing comprises sensing a speed of the mobile fuel dispenser and determining if the mobile fuel dispenser is in said at least partially enclosed area or not based on the sensed speed.