



9 February 2009

PATENTS ACT 1977

BETWEEN

Rigcool Limited

Claimant

and

Optima Solutions UK Limited

Defendant

PROCEEDINGS

Application under section 72 of the Patents Act 1977 in
respect of patent number GB 2425742

HEARING OFFICER

C L Davies

DECISION

- 1 In order to meet the issues raised, the proprietors have submitted proposals for amendment of the specification. The proposed amendments, made only to the claims, are annexed to this decision and the applicants for revocation have expressed their willingness to withdraw their application on the basis of these amendments. The amendments have been advertised and no notice of opposition to them has been filed. The amendments are such as may lawfully be made in these proceedings. Having now considered the objections raised by the applicants for revocation, I decide to allow the claims to be amended in the manner shown in the said copy of the claims attached and make no order for revocation of the patent.

Appeal

- 2 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

C L Davies

Deputy Director acting for the Comptroller

1 **CLAIMS**

2

3 1. A **hydrocarbon well-test flare** nozzle for a hose or
4 fixed pipework installation, the nozzle **adapted for**
5 **forming a water wall around a flare in a hydrocarbon**
6 **well-test operation and** comprising:

7 a body **having an inlet and an outlet;**

8 a channel extending through the body of the nozzle
9 **between the inlet and the outlet;** and

10 a fluid deflector arranged at or near the downstream
11 end of the channel **adjacent the body outlet, the**
12 **deflector determining** ~~to determine~~ the direction of
13 flow of ~~the~~ fluid as it leaves the nozzle;

14 wherein the fluid deflector and the body of the
15 nozzle together define a width of the channel at or
16 near said downstream end, said channel width being
17 variable by adjusting a position of the fluid
18 deflector relative to the nozzle body;

19 **and wherein the body inlet, the body outlet and the**
20 **fluid deflector are arranged on a longitudinal axis**
21 **of the body such that, in use, fluid flows from the**
22 **body inlet along the channel to the body outlet and**
23 **impinges on the fluid deflector with minimal energy**
24 **loss prior to impingement on the fluid deflector;**

25 and **further wherein** the nozzle comprises a self-
26 cleaning mechanism for adjusting the channel width.

27

28 2. A nozzle as claimed in Claim 1 wherein the fluid
29 deflector includes a deflecting surface positioned
30 relative to the end of the channel to define the

- 1 width of the channel at or near the downstream end of
2 the channel.
3
- 4 3. A nozzle as claimed in Claim 2 wherein at least part
5 of the channel is defined between the deflecting
6 surface and an outlet surface of the body.
7
- 8 4. A nozzle as claimed in Claim 3 wherein the deflecting
9 surface and the body outlet surface are substantially
10 parallel.
11
- 12 5. A nozzle as claimed in any one of Claims 2 to 4
13 wherein the deflector surface is disposed at an
14 obtuse angle relative to a main axis of the body.
15
- 16 6. A nozzle as claimed in Claim 5 wherein the deflector
17 surface is disposed at an angle of approximately 105
18 degrees relative to a main axis of the body.
19
- 20 7. A nozzle as claimed in any preceding claim wherein
21 the fluid deflector is movably mounted relative to
22 the body, to enable adjustment of a position of the
23 deflector relative to the body, to facilitate
24 adjustment of the channel width.
25
- 26 8. A nozzle as claimed in any preceding claim wherein
27 the channel is provided with a gap or space suitable
28 for accommodating a spacer to alter the position of
29 the fluid deflector relative to the end of the
30 channel, thereby varying the width of said channel.
31
- 32 9. A nozzle as claimed in any preceding claim wherein
33 the deflector is threadably coupled to the body, such

1 that rotation of the deflector relative to the body
2 advances and/or retracts the deflector relative to
3 the body, thereby facilitating adjustment of the
4 channel width.
5

6 10. A nozzle as claimed in any preceding claim wherein
7 the mechanism comprises an actuator and one or more
8 sensors, the actuator moving the deflector in
9 response to a detected ~~increase~~ **reduction** in fluid
10 flow rate indicative of trapped debris in the nozzle.
11

12 11. A nozzle as claimed in any one of Claims 2 to 10
13 wherein the fluid deflector comprises the deflecting
14 surface and a central beam extending from the
15 deflecting surface into the body of the nozzle, the
16 central beam being attachable to the body of the
17 nozzle.
18

19 12. A nozzle as claimed in any preceding claim wherein
20 the channel extending through the body of the nozzle
21 is an annular channel.
22

23 13. A nozzle as claimed in any preceding claim wherein
24 the nozzle further comprises a central channel
25 extending through the body of the nozzle.
26

27 14. A nozzle as claimed in Claim 13 wherein the central
28 channel extends through the central beam of the
29 deflector.
30

31 15. A nozzle as claimed in any preceding claim wherein
32 the nozzle is further provided with sensor means.
33

- 1 16. A nozzle as claimed in Claim 15 wherein the sensor
2 means is located in the fluid deflector.
3
- 4 17. A nozzle as claimed in Claim 16 wherein the sensor
5 means are embedded in a front surface of the fluid
6 deflector.
7
- 8 18. A nozzle as claimed in Claim 15 wherein the sensor
9 means is located in the body of the nozzle.
10
- 11 19. A nozzle as claimed in any one of Claims 13 to 18
12 wherein the nozzle further comprises filter coupling
13 means for coupling a filter to the upstream end of
14 the central channel.
15
- 16 20. A nozzle as claimed in any one of Claims 13 to 19
17 wherein the nozzle further comprises nozzle-coupling
18 means for coupling a nozzle to the downstream end of
19 the central channel.
20
- 21 21. A nozzle as claimed in any preceding claim wherein
22 the fluid deflector is frusto-conical and is thus
23 provided with a frusto-conical deflecting surface,
24 angled away from the direction of fluid flow.
25
- 26 22. A nozzle as claimed in Claim 21 wherein the frusto-
27 conical deflecting surface extends beyond the maximum
28 width of the channel to direct the flow of fluid.
29
- 30 23. A kit of parts for a nozzle, the kit of parts
31 comprising a body, a fluid deflector and a coupling
32 means adapted to connect the fluid deflector to the

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1 body, wherein the kit of parts when assembled forms a
2 nozzle according to Claim 1.