



29 November 2011

CHANGE REGISTRATION

This is to certify that the following change(s) have been accepted:

Holder of certificate: Alfa Laval Tank Equipment A/S
Baldershøj 19
Ishøj
Denmark

Change details: **The certificate listed below is now held in the name and address of:**

**Oreco A/S
Lejrvej 25
DK-3500
Vaerloese
Denmark**

Certificates affected: Baseefa06ATEX0079X

The purpose of this document is to permit existing information (for example on Certificate Schedule Drawings or label marking) to be replaced by equivalent new information as described above. No other change may be made to the certified design.

Baseefa

Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail info@baseefa.com web site www.baseefa.com
Baseefa is a trading name of Baseefa Ltd
Registered in England No. 4305578. Registered address as above..

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



EC - TYPE EXAMINATION CERTIFICATE

**Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

- 3 EC - Type Examination Certificate Number: **Baseefa06ATEX0079X**
- 4 Equipment or Protective System: **TYPE SNS200 TANK CLEANING MACHINE**
- 5 Manufacturer: **ALFA LAVAL TANK EQUIPMENT A/S**
- 6 Address: **Baldershøj 19, 2635 Ishøj, Denmark**
- 7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 Baseefa (2001) Ltd., Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential Report No. **05(C)0683**
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN13463-1:2001 EN13463-5:2003
- except in respect of those requirements listed at item 18 of the Schedule.
- 10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- 11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment or protective system shall include the following :
- ⊕ II 1 G c T82°C**
- This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **5322**

Project File No. **05/0683**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa

Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail info@baseefa.com web site www.baseefa.com
Baseefa is a trading name of Baseefa (2001) Ltd
Registered in England No. 4305578 at the above address

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa (2001) Ltd.

13

Schedule

14

Certificate Number Baseefa06ATEX0079X

15 Description of Equipment or Protective System

The TYPE SNS200 TANK CLEANING MACHINE comprises a drive unit, inlet pipe and cleaning head. The unit is intended to be normally operated in a vertical position.

The cleaning head comprises a geared body and geared nozzle, manufactured in bronze and stainless steel. The upper end of the body as attached to the lower end of the stainless steel inlet pipe, such that the body can rotate independently of the inlet pipe. Gear teeth around the outside of the body engage with the lower end of a drive shaft, which runs parallel to the inlet pipe and at its upper end is attached to the drive unit. In this way, rotation from the drive unit is transmitted to the cleaning head. The gearing arrangement between the body and the nozzle is such that rotation of the body causes the nozzle to slowly traverse through an arc, which is vertically displaced with respect to the rotation of the body.

Thus, process fluid which enters at the upper end of the inlet pipe, travels through the body of the cleaning head, before being dispersed both horizontally and vertically as it leaves the nozzle.

The drive unit consists of a stainless steel control unit, a hydraulic motor and a worm gear. Hydraulic fluid entering the control unit is passed to the hydraulic motor which rotates and thus drives the worm gear. The worm gear is equipped with two outputs; one output is attached to the drive shaft which transmits rotation to the cleaning head, while the other drives a threaded spindle onto which is mounted a travelling cam assembly. When the cam assembly reaches the limit of its travel, an actuator causes the valving within the control unit to change position. This in turn causes the flow of fluid to the hydraulic motor inlet and outlet ports to be reversed, with a consequent reversal in direction of the worm gear and hence in the rotation of the cleaning head body and nozzle. The cam assembly then moves in the opposite direction until it reaches the other end of its travel, at which point the complete cycle restarts.

The hydraulic motor is accepted on the basis of a Declaration of Conformity by the respective manufacturer. As such, it does not form part of this assessment.

Variation 1.1

Optional omission of the control unit, in order to allow fitment of another suitably certified unit which performs the same function.

16 Report Number

05(C)0683

17 Special Conditions for Safe Use

1. The drive unit must be placed outside the Category 1 environment at all times.
2. The maximum permitted process fluid temperature is 82°C, with an ambient temperature range of -15°C to 50°C.
3. The maximum permitted process fluid pressure is 15bar.
4. If the unit is operated in a vessel having an enclosed volume of greater than 100m³, the internal atmosphere of the vessel must be controlled to ensure that a flammable atmosphere does not occur.
5. When operated at fluid pressures greater than 12bar, in a vessel having a diameter greater than 3m, the internal atmosphere of the vessel must be controlled to ensure that a flammable atmosphere does not occur.
6. The unit must be effectively earthed at all times when in use.



18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Issue	Date	Description
76A000/033	2	03.06.30	General Arrangement
76A101	1	03.01.16	Drive Unit
76A311	1	02.11.26	Control Unit
SNS-AS-02-001	2	05.10.25	Layout
SNS-AS-02-0-02	0	06.03.08	Certification Label
42 00 353 GB	B	04.08.09	Worm Gear General Arrangement