(1) # EC-TYPE-EXAMINATION CERTIFICATE

Translation

(2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 94/9/EC**

(3) EC-Type-Examination Certificate Number

TÜV 06 ATEX 7228

(4) Equipment: **Flap flow meter SDA RR M9..EEX / SAD RN M9..EEX**

(5) Manufacturer: **Krohne Meßtechnik GmbH & Co. KG**

(6) Address: **47058 Duisburg, Ludwig- Krohne- Straße 5**

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV CERT-Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Group, notified body No. 0035 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies this equipment 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 atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 194 /Ex 228. 00 / 06

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-0: 2004 **EN 50020: 2002**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:

Ex II 2 G Ex ia IIC T6

TÜV CERT-Zertifizierungsstelle für Explosionsschutz

Cologne, 2006-02-24

Dipl.-Ing. K. Wettingfeld

Notified by TÜV Rheinland Industrie Service 0035

This EC-type-examination Certificate without signature and stamp shall not be valid.
This EC-type-examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the TÜV Cert-Zertifizierungsstelle für Ex-Schutz-Produkte
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(13) **Appendix to**

(14) # EC Type Examination Certificate
TÜV 06 ATEX 7228

(15) Description of the Device

15.1 Article and Series
Flap flow meter SDA RR M9 ..EEX / SDA RN M9.... EEX

15.2 Description of the Devices

The flap flow meter consists of a mechanical part described in the type approval TÜV 03 ATEX 7041 X. In the indicator housing can also be installed up to 2 slot initiators with the type approval PTB 99 ATEX 2219 X and 1 electrical signal output with the type approval PTB 00 ATEX 2063. The slot initiators can be used to adjust a minimum or maximum value. A signal of 4 – 20 mA is outputted via the electrical output.
Type-approved inherently safe circuits must be used for the control of the slot initiators and the electrical signal output.
The maximum temperatures of the medium and the classification into temperature classes are described in Appendix A2 to the manual.

Temperature of medium	T_m	= -20°C to + 200°C
Ambient temperature	T_{amb}	= -20°C to + 60°C

15.3 Specifications

Signal output ESK II — in intrinsic safety EEX ia IIC type of protection only for the connection to a certified intrinsically safe electric circuit.

Maximum values:

U_i = 30V
I_i = 100 mA
P_i = 1 W
C_i = 20 nF
L_i negligibly low

Limiting value transmitter K

in intrinsic safety EEX ia II C type of protection only for the connection to certified intrinsically safe circuits.

Maximum values for each electric circuit:

For slot initiator type SC3.5- N0-Y

U_i = 16 V		U_i = 16 V
I_i = 25 mA		I_i = 52 mA
P_i = 64 mW	or	P_i = 169 mW
C_i = 150 nF		C_i = 150 nF
L_i = 150 µH		L_i = 150µH

For slot initiators type SJ3.5- SN and SJ3.5-S1N

U_i = 16 V		U_i = 16 V
I_i = 25 mA		I_i = 52 mA
P_i = 64 mW	or	P_i = 169 mW
C_i = 30 nF		C_i = 30 nF
L_i = 100µH		L_i = 100µH

(16) **Test Report No.** 194/Ex 228/00/06

(17) **Special Conditions for Safe Use**

None

(18) **Essential Safety and Health Requirements**

The requirements are met due to the conformity with the above-mentioned standards and an appropriate engineering design according to the current state of the art.

TÜV CERT-Zertifizierungsstelle

Cologne 24.02.06

Dipl. Ing. K. Wettingfeld