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**Flow measurement structures —  
Rectangular, trapezoidal and  
U-shaped flumes**

**AMENDMENT 1**

*Structures de mesure du débit — Canaux jaugeurs à col rectangulaire,  
à col trapézoïdal et à col en U*  
**AMENDEMENT 1**

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ISO 4359:2013/Amd 1:2017

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This document was prepared by Technical Committee ISO/TC 113, *Hydrometry*, Subcommittee SC 2, *Flow measurement structures*.

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# Flow measurement structures — Rectangular, trapezoidal and U-shaped flumes

## AMENDMENT 1

### 10.6.7

Replace the existing Formula (43) with the following:

$$u^*(C) = \pm [0,5 \pm 10(C_v - C_D)] \%$$

### 11.6.7

Replace the existing Formula (58) with the following:

$$u^*(C) = \pm [0,5 \pm 10(C_v - C_D)] \%$$

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### 12.6.8

Replace the existing Formula (77) with the following:

$$u^*(C) = \pm [0,5 \pm 10(C_v - C_D)] \%$$

### 13.3

Replace the existing Formula (87) with the following:

$$u^*(C) = \pm [0,5 \pm 10(C_v - C_D)] \%$$

### 14.4

Replace the existing formula with the following:

$$u^*(C) = \pm [0,5 + 10(1,035 - 0,947)] = \pm 1,38 \%$$

### 14.7.2

Replace the existing Formula (90) with the following:

$$u_c^*(Q)_{68} = \sqrt{1,38^2 + 0,52^2 + (1,5 \times 1,17)^2} = 2,29 \%$$

14.7.3

Replace the existing Formula (91) with the following:

$$U_c^*(Q)_{95} = 2 \times u_c^*(Q)_{68} = 4,58 \%$$

14.7.4

Replace “an uncertainty of 6,6 % at the 95 % level of confidence” with “an uncertainty of 4,58 % at the 95 % level of confidence”.

14.7.5, Table 5

Replace the existing Table 5 with the following:

**Table 5 — Uncertainty budget for example of flow in a rectangular-throated flume**

Parameter	Type/evaluation	$u$ and $u^*$ values	Sensitivity coefficients	Comment
$u^*(C)$	B/Normal	1,38 %	1,0	From 13.2.2
$u(E)$	B/Triangular	0,000 4 m		From Table B.1
$u(R)$	B/Manufacturer	1,0 % of range		From Table B.1
$u^*(h)$	Combined	1,17 %	1,5	Using Formula (88)
$u(b_r)$	B/Rectangular	0,002 m		Assumed resolution
$u(b_m)$	B/Rectangular	0,000 87		Measured range
$u^*(b)$	Combined	0,52 %	1,0	Using Formula (89)
$u^*(Q)_{68}$	Combined	2,29 %		Using Formula (90)
$u^*(Q)_{95}$	Combined	4,58 %		Using Formula (91)

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