ISO 5167 Orifice Plate Validation

Date		**Time**	23:49
Prepared By	Ahmed Hussein	**Site**	
Tag Number		**Client**	
Data Reference			
KCCL Reference	F071		
Description			

Options

Standard	ISO 5167 2003
Flatness	Calculated from measured gap

Inputs

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Meter tube bore	300	mm
Edge thickness	2	mm
Thickness	10	mm
Angle of bevel	45	°
Roughness	0.1	µm
Flatness (gap)	0.1	mm

Orifice Bore

Verticle	150	mm
Right verticle	149.98	mm
Horizontal	150.02	mm
Left verticle	149.98	mm

Outputs

Angle of Bevel

Angle of bevel	45	°	Pass, 5.1.6.2: The angle of bevel shall be 45° ± 15°

Diameter

Orifice diameter	149.995	mm	Pass, 5.1.8.1: Orifice diameter ≥ 12.5 mm
Beta ratio	0.499983333333333		Pass, 5.1.8.1: 0.1 ≤ ß ≤ 0.75

Flatness

Flatness	0.1	mm	Pass, 5.1.3.1: Gradient across plate must be less than 0.5% at all points

Roughness

Roughness	0.1	µm	Pass, 5.1.3.2: Ra < 0.0001d

Thickness

Edge thickness	2	mm	Pass, 5.1.5.1: 0.005D ≤ e ≤ 0.02D
Thickness	10	mm	Pass, 5.1.5.3: e ≤ E ≤ 0.05D

Validation Result

Result	1	PASS - Orifice plate validated against ISO 5167 criteria