

Discharge Report

Workspace: 72438-3InvioGN-10R

Study: Invio GN a metanodotto

Equipment Item: 10R Linea di mandata gas

72438-3InvioGN-10R\Invio GN a metanodotto\10R Linea di mandata gas

Material	GAS NATURALE	
East	0	m
North	0	m

Scenario (Leak) : 81,3 mm

72438-3InvioGN-10R\Invio GN a metanodotto\10R Linea di mandata gas\81,3 mm

Weather: Category 2/F

INPUT DATA

Inventory data

Mass in vessel	1303,01	kg
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Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	100	bar
Initial temperature	25	degC
Fluid state	Pressurized gas	

Scenario data

Phase to be released	Vapour	
Hole diameter	81,28	mm
Discharge coefficient	0,62	fraction

OUTPUT DATA

Mass flow rate	67,986	kg/s
Release duration	19,1658	s



Orifice or pipe exit data (before atmospheric expansion)

Pressure	53,4682	bar
Temperature	-19,5813	degC
Liquid mass fraction	0	fraction
Velocity at vena contracta (at exit for pipe releases)	356,025	m/s
Discharge coefficient	0,62	

Final Data (after atmospheric expansion)

Temperature	-56,7906	degC
Liquid mass fraction	0	fraction
Droplet diameter	0	um
Expanded diameter	0,530104	m
Velocity	300	m/s



Weather: Category 5/D

INPUT DATA

Inventory data

Mass in vessel	1303,01	kg
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Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	100	bar
Initial temperature	25	degC
Fluid state	Pressurized gas	

Scenario data

Phase to be released	Vapour	
Hole diameter	81,28	mm
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