

Discharge Report

Workspace: 72341-3InvioGN

Study: Invio GN a metanodotto

Equipment Item: 11R Metanodotto piattaforma Alt A

72341-3InvioGN\Invio GN a metanodotto\11R Metanodotto piattaforma Alt A

Material	GAS NATURALE	
East	0	m
North	0	m

Scenario (Leak) : 130mm

72341-3InvioGN\Invio GN a metanodotto\11R Metanodotto piattaforma Alt A\130mm

Weather: Category 2/F

INPUT DATA

Inventory data

Mass in vessel	1582,75	kg
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Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	80	bar
Initial temperature	50	degC
Fluid state	Pressurized gas	

Scenario data

Phase to be released	Vapour	
Hole diameter	130	mm
Discharge coefficient	0,62	fraction

OUTPUT DATA

Mass flow rate	119,946	kg/s
Release duration	13,1955	s

Orifice or pipe exit data (before atmospheric expansion)

Audit Number: 33724

Date: 07/07/2022 Time: 07:46

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Pressure	43,4562	bar
Temperature	3,52734	degC
Liquid mass fraction	0	fraction
Velocity at vena contracta (at exit for pipe releases)	404,685	m/s
Discharge coefficient	0,62	

Final Data (after atmospheric expansion)

Temperature	-5,13687	degC
Liquid mass fraction	0	fraction
Droplet diameter	0	um
Expanded diameter	0,810815	m
Velocity	300	m/s

Weather: Category 5/D

INPUT DATA

Inventory data

Mass in vessel	1582,75	kg
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Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	80	bar
Initial temperature	50	degC
Fluid state	Pressurized gas	

Scenario data

Phase to be released	Vapour	
Hole diameter	130	mm
Discharge coefficient	0,62	fraction

OUTPUT DATA

Mass flow rate	119,946	kg/s
Release duration	13,1955	s

Orifice or pipe exit data (before atmospheric expansion)

Pressure	43,4562	bar
Temperature	3,52734	degC
Liquid mass fraction	0	fraction
Velocity at vena contracta (at exit for pipe releases)	404,685	m/s
Discharge coefficient	0,62	

Final Data (after atmospheric expansion)

Temperature	-5,13687	degC
Liquid mass fraction	0	fraction
Droplet diameter	0	um
Expanded diameter	0,810815	m
Velocity	300	m/s

