

Discharge Report

Workspace: 72438-1RiempFSRU-5R

Study: Riempimento FSRU-ME4

Equipment Item: 5R Linee mandata pompe LNG Feed e collettore GNL durante riempimento

72438-1RiempFSRU-5R\Riempimento FSRU-ME4\5R Linee mandata pompe LNG Feed e collettore GNL durante riempimento

Material	GAS NATURALE	
East	0	m
North	0	m

Scenario (Leak) : 70mm

72438-1RiempFSRU-5R\Riempimento FSRU-ME4\5R Linee mandata pompe LNG Feed e collettore GNL durante riempimento\70mm

Weather: Category 2/F

INPUT DATA

Inventory data

Mass in vessel	17328,7	kg
----------------	----------------	----

Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	9	bar
Initial temperature	-160	degC
Fluid state	Non-saturated liquid	

Scenario data

Phase to be released	Liquid	
Tank head	0	m
Hole diameter	70	mm
Discharge coefficient	0,62	fraction

OUTPUT DATA

Mass flow rate	68,255	kg/s
----------------	--------	------



Release duration 253,881 s

Orifice or pipe exit data (before atmospheric expansion)

Pressure	1,01325	bar
Temperature	-160,216	degC
Liquid mass fraction	1	fraction
Velocity at vena contracta (at exit for pipe releases)	62,8669	m/s
Discharge coefficient	0,62	

Final Data (after atmospheric expansion)

Temperature	-160,343	degC
Liquid mass fraction	0,999206	fraction
Droplet diameter	276,318	um
Expanded diameter	0,0597827	m
Velocity	62,8669	m/s

Weather: Category 5/D

INPUT DATA

Inventory data

Mass in vessel	17328,7	kg
----------------	----------------	----

Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	9	bar
Initial temperature	-160	degC
Fluid state	Non-saturated liquid	

Scenario data

Phase to be released	Liquid	
Tank head	0	m
Hole diameter	70	mm
Discharge coefficient	0,62	fraction

OUTPUT DATA

Mass flow rate	68,255	kg/s
Release duration	253,881	s

Orifice or pipe exit data (before atmospheric expansion)

Pressure	1,01325	bar
Temperature	-160,216	degC
Liquid mass fraction	1	fraction
Velocity at vena contracta (at exit for pipe releases)	62,8669	m/s
Discharge coefficient	0,62	

Final Data (after atmospheric expansion)

Temperature	-160,343	degC
Liquid mass fraction	0,999206	fraction
Droplet diameter	276,318	um
Expanded diameter	0,0597827	m



Velocity	62,8669	m/s
----------	---------	-----

