

# Discharge Report

**Workspace: 72452 Ottimizz-00**

**Study: FSRU in rigassificazione**

**Equipment Item: 13R Linea second riscaldatori**

72452 Ottimizz-00\FSRU in rigassificazione\13R Linea second riscaldatori

Material	<b>GAS NATURALE</b>	
East	0	m
North	0	m

## Scenario (Leak) : 30mm

72452 Ottimizz-00\FSRU in rigassificazione\13R Linea second riscaldatori\30mm

**Weather: Category 2/F**

### INPUT DATA

#### Inventory data

Mass in vessel	<b>57,3437</b>	kg
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#### Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	<b>5</b>	bar
Initial temperature	<b>30</b>	degC
Fluid state	<b>Pressurized gas</b>	

#### Scenario data

Phase to be released	Vapour	
Hole diameter	<b>30</b>	mm
Discharge coefficient	<b>0,62</b>	fraction

### OUTPUT DATA

Mass flow rate	0,459004	kg/s
Release duration	124,931	s

#### Orifice or pipe exit data (before atmospheric expansion)

Pressure	3,27323	bar
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Temperature	-9,93417	degC
Liquid mass fraction	<b>0</b>	fraction
Velocity at vena contracta (at exit for pipe releases)	408,27	m/s
Discharge coefficient	0,62	

### **Final Data (after atmospheric expansion)**

Temperature	6,73324	degC
Liquid mass fraction	0	fraction
Droplet diameter	0	um
Expanded diameter	<b>0,0512669</b>	m
Velocity	300	m/s

## Weather: Category 5/D

### INPUT DATA

#### Inventory data

Mass in vessel	57,3437	kg
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#### Stagnation Data (upstream end for long pipe)

Initial pressure (gauge)	5	bar
Initial temperature	30	degC
Fluid state	Pressurized gas	

#### Scenario data

Phase to be released	Vapour	
Hole diameter	30	mm
Discharge coefficient	0,62	fraction

### OUTPUT DATA

Mass flow rate	0,459004	kg/s
Release duration	124,931	s

#### Orifice or pipe exit data (before atmospheric expansion)

Pressure	3,27323	bar
Temperature	-9,93417	degC
Liquid mass fraction	0	fraction
Velocity at vena contracta (at exit for pipe releases)	408,27	m/s
Discharge coefficient	0,62	

#### Final Data (after atmospheric expansion)

Temperature	6,73324	degC
Liquid mass fraction	0	fraction
Droplet diameter	0	um
Expanded diameter	0,0512669	m
Velocity	300	m/s



