

Discharge Report

Workspace: 72438-1RiempFSRU-13R

Study: Riempimento FSRU-ME4

Equipment Item: 13R Linee BOG a metaniera

72438-1RiempFSRU-13R\Riempimento FSRU-ME4\13R Linee BOG a metaniera

| | | |
|----------|---------------------|---|
| Material | GAS NATURALE | |
| East | 0 | m |
| North | 0 | m |

Scenario (Leak) : 80mm

72438-1RiempFSRU-13R\Riempimento FSRU-ME4\13R Linee BOG a metaniera\80mm

Weather: Category 2/F

INPUT DATA

Inventory data

| | | |
|----------------|----------------|----|
| Mass in vessel | 451,159 | kg |
|----------------|----------------|----|

Stagnation Data (upstream end for long pipe)

| | | |
|--------------------------|------------------------|------|
| Initial pressure (gauge) | 1 | bar |
| Initial temperature | -110 | degC |
| Fluid state | Pressurized gas | |

Scenario data

| | | |
|-----------------------|-------------|----------|
| Phase to be released | Vapour | |
| Hole diameter | 80 | mm |
| Discharge coefficient | 0,62 | fraction |

OUTPUT DATA

| | | |
|------------------|---------|------|
| Mass flow rate | 1,55722 | kg/s |
| Release duration | 289,721 | s |

Orifice or pipe exit data (before atmospheric expansion)



| | | |
|--|----------|----------|
| Pressure | 1,09415 | bar |
| Temperature | -132,787 | degC |
| Liquid mass fraction | 0 | fraction |
| Velocity at vena contracta (at exit for pipe releases) | 287,33 | m/s |
| Discharge coefficient | 0,62 | |

Final Data (after atmospheric expansion)

| | | |
|----------------------|------------------|----------|
| Temperature | -134,871 | degC |
| Liquid mass fraction | 0 | fraction |
| Droplet diameter | 0 | um |
| Expanded diameter | 0,0636136 | m |
| Velocity | 300 | m/s |



Weather: Category 5/D

INPUT DATA

Inventory data

| | | |
|----------------|---------|----|
| Mass in vessel | 451,159 | kg |
|----------------|---------|----|

Stagnation Data (upstream end for long pipe)

| | | |
|--------------------------|-----------------|------|
| Initial pressure (gauge) | 1 | bar |
| Initial temperature | -110 | degC |
| Fluid state | Pressurized gas | |

Scenario data

| | | |
|-----------------------|--------|----------|
| Phase to be released | Vapour | |
| Hole diameter | 80 | mm |
| Discharge coefficient | 0,62 | fraction |

OUTPUT DATA

| | | |
|------------------|---------|------|
| Mass flow rate | 1,55722 | kg/s |
| Release duration | 289,721 | s |

Orifice or pipe exit data (before atmospheric expansion)

| | | |
|--|----------|----------|
| Pressure | 1,09415 | bar |
| Temperature | -132,787 | degC |
| Liquid mass fraction | 0 | fraction |
| Velocity at vena contracta (at exit for pipe releases) | 287,33 | m/s |
| Discharge coefficient | 0,62 | |

Final Data (after atmospheric expansion)

| | | |
|----------------------|-----------|----------|
| Temperature | -134,871 | degC |
| Liquid mass fraction | 0 | fraction |
| Droplet diameter | 0 | um |
| Expanded diameter | 0,0636136 | m |
| Velocity | 300 | m/s |



