

## F17D

**PIPE-LINE SYSTEMS; PIPE-LINES** (pumps or compressors [F04](#); fluid dynamics [F15D](#); valves or the like [F16K](#); pipes, laying pipes, supports, joints, branches, repairing, work on the entire line, accessories [F16L](#); steam traps or the like [F16T](#); fluid-pressure electric cables [H01B 9/06](#))

### Definition statement

*This place covers:*

The way of operating pipelines for transporting gas or liquids like crude oil. The main subject-matter of this subclass is dealing with preventing of fluid leaks, e.g. gas leaks, monitoring losses of fluids or locating losses of fluid.

### Relationships with other classification places

This group deals with the operating of pipelines and does not deal with the construction of pipelines, which is relevant for subclass [F16L](#).

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Petroleum, Gas or coke industries, technical gases containing carbon monoxide, fuels, lubricants, peat	<a href="#">C10</a>
Pumps or compressors	<a href="#">F04</a>
Influencing flow of fluids in a pipeline	<a href="#">F15D 1/02</a>
Valves or the like	<a href="#">F16K</a>
Constructional details of pipes	<a href="#">F16L</a>
Laying or reclaiming pipes; Repairing or joining pipes on or under water	<a href="#">F16L 1/00</a>
Supports for pipes, cables or protective tubing	<a href="#">F16L 3/00</a> or <a href="#">F16L 7/00</a>
Thermal insulation of pipe-lines	<a href="#">F16L 59/00</a>
Steam traps or the like	<a href="#">F16T</a>
Central heating systems	<a href="#">F24D</a>
Fluid-pressure electric cables	<a href="#">H01B 9/06</a>

## F17D 1/00

Pipe-line systems (conveying articles or materials through a pipe-line by means of a fluid carrier [B65G 51/00](#), [B65G 53/00](#); liquids [B67D](#); special devices for transferring liquids from bulk storage containers into vehicles or boats or vice versa, e.g. loading or unloading vehicles or portable containers [B67D 7/00](#); conveying material which has been excavated by a dredger or soil shifter through a pipe-line [E02F 7/10](#); sewer pipe-line systems [E03F 3/00](#); thermal insulation of pipe-lines [F16L 59/00](#); central heating systems [F24D](#))

### Definition statement

*This place covers:*

The way of conveying fluids, like two phase gas liquid mixtures, gas, liquids or viscous products, slurries comprising solid particles within a fluid. This group also includes systems to reduce friction and improve flow in pipe lines.

### References

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Conveying articles or materials through a pipe-line by means of a fluid carrier	<a href="#">B65G 51/00</a> , <a href="#">B65G 53/00</a>
Dispensing, delivering transporting liquids	<a href="#">B67D</a>
Special devices for transferring liquids from bulk storage containers into vehicles or boats or vice versa, e.g. loading or unloading vehicles or portable containers	<a href="#">B67D 7/00</a>
Conveying material which has been excavated by a dredger or soil shifter through a pipe-line	<a href="#">E02F 7/10</a>
Water main or service pipe systems	<a href="#">E03B 7/00</a>
Public or like main pipe systems	<a href="#">E03B 7/02</a>
Domestic or like local pipe systems	<a href="#">E03B 7/04</a>
Sewer pipe-line systems	<a href="#">E03F 3/00</a>
Heating or cooling pipes or pipe systems	<a href="#">F16L 53/00</a>
Domestic hot-water supply systems	<a href="#">F24D 17/00</a>

## F17D 3/00

### Arrangements for supervising or controlling working operations

#### Definition statement

*This place covers:*

- Supervision and control of the conveyance of one or several products.
- Arrangements for sampling fluid from the pipe-line or for injecting a composition into the pipe-line.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Separation in general	<a href="#">B01D</a>
Separation of liquids	<a href="#">B01D 17/00</a>
Separation of gases or vapours	<a href="#">B01D 53/00</a>
Using cleaning devices introduced into and moved along the pipes by fluid pressure	<a href="#">B08B 9/04</a>
Pigs or moles, i.e. devices movable in a pipe or conduit with or without self-contained propulsion means and their launching and detection	<a href="#">F16L 55/26</a> - <a href="#">F16L 55/48</a>
Measuring volume or flow	<a href="#">G01F</a>
Sampling and preparing specimens for investigation	<a href="#">G01N 1/00</a>

## F17D 5/00

Protection or supervision of installations (arrangements for protecting foundations [E02D 31/00](#); protecting pipes from damage or internal or external wear [F16L 57/00](#), against corrosion and scale [F16L 58/00](#); investigation of the fluid-tightness of structures [G01M 3/00](#))

### Definition statement

*This place covers:*

The prevention of gas leaks, or the monitoring of losses of fluids or the locating of losses of fluid.

Protection or monitoring of installation or pipelines

Protection of installations or persons from the effects of high voltage induced in the pipe-line

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for protecting foundations	<a href="#">E02D 31/00</a>
Protecting pipes from damage or internal or external wear	<a href="#">F16L 57/00</a>
Protection against corrosion or scale	<a href="#">F16L 58/00</a>
Investigation of the fluid-tightness of structures	<a href="#">G01M 3/00</a>