

# Order on Protection of Submarine Cables and Pipelines

(The Executive Order on Cables)

The following shall be laid down pursuant to section 5(4) and section 6(3) of the "*lov om skibsfartens betryggelse*" (act on safety of navigation), cf. Consolidated Act no. 587 of 29 September 1988 and upon authorisation in Executive Order no. 570 of 26 September 1988 in consultation with the Danish Ministry of Defence and the Ministry of Transport, cf. Act no. 54 of 15 February 1895 on protection of submarine cables and pipelines as amended by Act no. 134 of 10 May 1915, Act no. 151 of 10 May 1967 and Act no. 480 of 8 November 1972:

**1.-(1)** Ships shall not, unless absolutely necessary, anchor within areas designated for submarine cables and pipelines of any kind (pipelines for carrying hydrocarbon etc.), and such areas which include the associated protection zones, cf. section 4.

**(2)** Furthermore, within the protection zones, dredging, boulder removal and any use of equipment etc. dragged across the seabed shall be banned. Before piles are placed in the seabed in these areas, negotiations on the installation and location of the piles shall be carried out with the owner of the cables or pipelines or his local representative.

**(3)** Dumping within protection zones around cables and pipelines or in areas where the material dumped could drift over cables or pipelines, including outfall and intake structures in particular, shall be approved beforehand by the owner of the cables or pipelines. This approval shall be stated in the dumping permit.

**2.-(1)** In the event that a ship in a contingency situation as mentioned in section 1(1) is anchored within protection zones around cables and pipelines the following shall be observed:

- 1) The master shall notify the anchoring immediately to the Admiral Danish Fleet Headquarters. There shall be no attempt to weigh the anchor before permission has been granted from the owner of the cables or pipelines. Such permission may be obtained through the Admiral Danish Fleet Headquarters, which will notify the owner of the cables or pipelines and the authorities, see point 3 of the Annex.
- 2) Before weighing the anchor, the master shall, as far as possible, procure information on the position of the anchor in relation to the cables or pipelines. The weighing shall be carried out cautiously and according to the conditions laid down in the permission; if the anchor is not free of cables or pipelines, it shall not be weighed, unless the master is certain that under the given circumstances, including depth of water, current conditions, state of the wind, the construction of the anchor etc., the anchor can be freed without damaging cables or pipelines. If the master is not certain hereof, the anchor shall, provided consideration of the safety of the ship so warrants, be cut free after being marked by a buoy or similar.

- 3) In the event of a rupture or other damage to the cable or pipeline, or if a cable has been caught, the position in which this took place shall be determined as accurately as possible, possibly by the use of bearings, and shall be marked by a buoy or similar.
- 4) According to the circumstances, the master may subsequently be ordered to give a statement.

(2) See the Annex for submarine cables and pipelines.

3. The regulations prescribed in section 2 shall apply correspondingly in the event that a ship, within the protection zones of cables or pipelines, has used equipment or similar which may damage the cables or pipelines, notwithstanding the ban in section 1.

4.-(1) A cable or pipeline area shall include a 200 meter wide protection zone along each side of the cable or pipeline, as shown on the nautical chart, respectively the beacon line for the cable or pipeline unless otherwise explicitly announced in specific circumstances, for instance in "*Efterretninger for Søfarende*" (the Danish equivalent to "Notices to Mariners"). Large cable or pipeline areas will usually be indicated as beacon lines for the outermost cables or pipelines and sometimes also for beacon lines for cables or pipelines between these. If nothing has otherwise been announced and shown on the nautical chart, the protection zone of the cable and pipeline area shall include the area between the outermost beacon lines and an area of 200 m outside these beacon lines.

(2) The cable and pipeline areas have been marked on Danish, Faeroese and Greenlandic nautical charts and mentioned in the associated sailing directions under the relevant waters. Determination of new cable or pipeline areas and changes to existing cable or pipeline areas shall be announced in "*Efterretninger for Søfarende*" (the Danish equivalent to "Notices to Mariners") and in "Chart corrections" (*Søkortrettelser*).

(3) On the nautical chart, cables and pipelines are shown individually or as areas with several cables or pipelines. In the latter case the total extent of the cable and pipeline area will appear on the nautical chart. Protection zones around individual cables and pipelines are shown on the nautical charts only in connection with the line of the cable or pipeline.

(4) The provisions of this Executive Order shall not apply within the area of a port, however cables and pipelines as well as provisions regarding local conditions are mentioned in »*Den danske Havnelods*« (the Danish guide to port entry), »*Havneoplysninger for Færøerne*« (the Faeroese guide to port entry) and »*Den grønlandske Havnelods*« (the Greenlandic guide to port entry).

5.-(1) The ban on anchoring etc. in protection zones around cables and pipelines shall not cover ships which, on behalf of a relevant authority, are carrying out survey work, buoy service, cable work and similar, as well as ships used by the relevant owner of cables or pipelines for such work within the area. Such ships shall not be obliged to notify of anchoring, cf. section 2, point 1.

(2) The prohibition mentioned in section 1 shall not cover seabed mooring of navigational buoys.

6. Supervision of compliance with the provisions of this Order shall be carried out by the "*Generaldirektoratet for post- og telegrafvæsenet*" (the general directorate for postal and telegraph

services), the Danish Energy Authority, and other supervisory authorities of cable and pipeline owners.

7. Any person violating this Executive Order shall be liable to a fine.

8.-(1) This Executive Order shall enter into force on 1 January 1993.

(2) Executive Order no. 327 of 29 October 1962 on Protection of Submarine Cables and Pipelines shall be repealed.

*The Danish Maritime Authority, 27 November 1992*

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## **Annex**

Submarine cables and pipelines

### **1. General**

#### *Submarine cables*

It can be extremely dangerous to come into contact with all submarine cables, irrespective of whether they are cables for power supply (power cables) or telecommunications (communications cables).

The most important parts of submarine cables are protected by strong iron-wire reinforcement. Over this, there is either a wound-yarn coating, impregnated with a tar-like substance, or a hard plastic coating.

Cable thickness may vary considerably; the thinnest being app. 3 cm in diameter (weight app. 3 tonnes/km) and the thickest app. 15 cm (weight app. 50 tonnes/km).

If a cable is bent sharply or flattened, it will be damaged on the inside, even though the cable seems intact on the outside.

Cutting a submarine cable may be extremely dangerous. Power cables and many communications cables transmit voltage which may be dangerous if treated incorrectly. Many communications cables are optical fibre cables where laser diodes are used as illuminators. The light from the laser may be harmful to the retina of the eye, if exposed to a strong laser beam.

All ships should do their best to avoid contact with submarine cables, as damage may lead to disturbance to installations with great impact on society in addition to large repair costs. Anyone damaging submarine cables shall incur criminal liability and possible liability for damages according to the circumstances.

As stated in section 4(2) of this Executive Order, cable areas in Danish, Faeroese and Greenlandic waters as well as the associated beacons are plotted on nautical charts and mentioned in the associated sailing directions.

Some cables in narrow fairways and shallow waters have not been plotted on the nautical chart or marked by cable beacons. In these circumstances the landing on shore of the cables will be marked by a cable sign with an explanatory text. This cable sign will appear on the nautical chart.

### *Pipelines*

Submarine oil and gas pipelines may be highly dangerous if damaged. Oil and gas pipelines are usually buried and covered, but may in some places be laid on the sea bed in connection with supporting structures. However, some pipelines have been laid on the seabed without being subsequently buried.

Large pipelines (diameter of more than 250 mm) are normally covered by a concrete coating to give the pipeline adequate weight and secure against buoyancy. The pipeline operational pressure may be up to 140 bars. Damage could therefore result in large emissions of gas and oil which may lead to danger of explosion, loss of ships' buoyancy and pollution of the environment. At the same time, damage to pipelines will result in disturbance to installations with great impacts on society.

All ships should therefore do their best to avoid contact with submarine pipelines. Anyone damaging submarine pipelines shall incur criminal liability and possible liability for damages according to the circumstances.

## **2. Marking of submarine cables and pipelines**

Cable areas are usually marked with cable beacons, normally including a forward and aft beacon onshore. There may be beacon lines consisting of two aft beacons with a shared forward beacon or two forward beacons with a shared aft beacon.

In narrow fairways, a pipeline may be marked with beacons.

The beacons mentioned may be fitted with a light.

Forward and aft beacons seen in line indicate the middle line of the area, unless otherwise expressly stated, cf. section 4 of this Executive Order, or stated on the nautical chart.

### *Cable beacons*

In a beacon line, the forward beacon consists of a circular slatted surface and the aft beacon of a similar circular surface over a square surface (diamond). The circular surfaces are painted white with a red centre, whereas the square surface is painted white with a red border. If cable lights are used, the aft beacon is fitted with a red light over a white light and the forward beacon with a red light.

### *Pipeline beacons*

In beacon lines marking pipelines, the aft beacon and forward beacon are fitted with a square surface (diamond). The beacons are painted yellow. If beacons are fitted with a light, yellow light shall be used on both beacons.

### *Warning signals*

To warn vessels which in connection with anchoring or fishing are estimated to be so close to a submarine cable or pipeline that there is a risk of damage, the flag signal QU meaning that anchoring is prohibited, may be raised from nearby patrol vessels, if necessary.

The signals for ships engaged in laying or picking up submarine cables dealt with in the Convention on the International Regulations for Preventing Collisions at Sea, 1972, shall also apply as warnings.

Special cable buoys or cable lightbuoys which are yellow and marked with the word "Cable" as well as the name or mark of the owner may, in certain areas, be laid in the cable line. These buoys must not be touched.

In connection with pipelines, there may be submarine valve installations protruding from the sea bed. These installations may be marked with buoys (isolated danger marks).

### **3. Ships, which are grounded or anchored in a cable or pipeline area**

Ships which are grounded, anchored, or has jammed tools in a cable or pipeline area shall notify this immediately to the Admiral Danish Fleet, which will establish contact to the owner of the cables or pipelines. Immediately after, the owner will contact the ship in order to prevent damage to cables or pipelines in cooperation with the ship. It is extremely important for the cooperation that the position of the anchor as well as the ship is stated with as much accuracy as possible.

### **4. Compensation for loss of equipment**

A ship shall be entitled to compensation for loss of anchor or fishing gear which was sacrificed in order to avoid damaging a submarine cable or pipeline, cf. Act no. 54 of 15 February 1895, as amended by Act no. 134 of 10 May 1915, Act no. 151 of 10 May 1967 and Act no. 480 of 8 November 1972. The master shall report his claim to the relevant person within 24 hours after arrival at the first port of call.

In foreign ports, information shall be obtained from the Danish representation on the relevant person to report the claim.

Any claim for compensation shall always be enclosed with a transcript of the ship's log book stating the circumstances of the incident and a statement on the nature of equipment lost, including a copy of the invoice for the purchase of the equipment. The claim for compensation should be prepared immediately after the incident and be signed by the master and by a member of the complement

Translation: Only the Danish document has legal validity.

who witnessed the incident. The master shall therefore produce proper evidence that he or she is entitled to make the claim.