Statutory Order on the sulphur content in solid and liquid fuels


Chapter 1
Purpose, scope and definitions

Section 1. This Statutory Order lays down limits for the sulphur content in certain solid and liquid fuels, including fuels used on board ships and on offshore platforms, as well as regulations for use of said fuels, and for marketing marine fuels.

Section 2. For the purpose of this Statutory Order:
1) heavy fuel oil means:
   a) petroleum-derived liquid fuels, excluding marine fuels, falling within CN code 2710 19 51 to 2710 19 69,
   b) petroleum-derived liquid fuels, other than gas oil and marine gas oil, which, by reason of their distillation limits, fall within the category of heavy oils intended for use as fuel and of which less than 65% by volume (including losses) distils at 250 °C by the ASTM D86 method,
   c) petroleum-derived liquid fuels for which the distillation, cf. point b and No. 3, point b, cannot be determined by the ASTM D86 method;
2) Gas oil means:
   a) petroleum-derived liquid fuels, excluding marine fuels, falling within CN code 2710 19 25, 2710 19 29, 2710 19 45 or 2710 19 49,
   b) petroleum-derived liquid fuels, excluding marine fuels, of which less than 65% by volume (including losses) distils at 250 °C and of which at least 85% by volume (including losses) distils at 350 °C by the ASTM D86 method;
3) marine fuel means petroleum-derived liquid fuels intended for use or in use on board a ship or on an offshore platform, including those fuels defined in ISO 8217;
4) marine diesel oil means marine fuel which has a viscosity or density falling within the ranges of viscosity or density defined for DMB and DMC grades in Table I of ISO 8217;
5) marine gas oil means marine fuel which has a viscosity or density falling within the ranges of viscosity or density defined for DMX and DMA grades in Table I of ISO 8217;
6) Annex VI of the MARPOL Convention means the annex entitled "Regulations for the Prevention of Air Pollution from Ships" in the 1997 Protocol to the International Convention on the Prevention of Pollution from Ships, 1973, as amended by the related Protocol of 1978 (the MARPOL Convention);
7) passenger ship means a ship that carries more than 12 passengers, where a passenger is every person other than:
   a) the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship, and
   b) a child under one year of age;
8) regular services means ship crossings between the same two or more ports, or a series of voyages from and to the same port without intermediate calls, either:
   a) according to a published timetable, or
   b) with crossings so regular or frequent that they constitute a recognisable schedule;
9) ship at berth means a ship which is securely moored or anchored in a European Community port while loading, unloading or hotelling, including the time spent when not engaged in cargo operations;
10) Inland waterway vessel means a vessel particularly intended for use on an inland waterway as defined in Council Directive 82/714/EEC of 4 October 1982 laying down technical requirements for inland waterway vessels, including all vessels which carry:

- a Community inland navigation certificate, as defined in Directive 82/714/EEC, or
- a certificate issued pursuant to Article 22 of the Revised Convention for the Navigation of the Rhine;

11) Placing on the market shall mean supplying or making available to third persons, against payment or free of charge, anywhere within Danish jurisdiction, marine fuels for on board combustion, except for supplying or making available marine fuels for export in ships’ cargo tanks;

12) Emission abatement technology means an exhaust gas cleaning system, or any other technological method intended to reduce emissions of sulphur and that is verifiable and enforceable;

13) ASTM method means the methods laid down by the American Society for Testing and Materials in the 1976 edition of standard definitions and specifications for petroleum and lubricating products;

14) Combustion plant means any technical apparatus in which fuels are combusted in order to use the heat generated;

15) % by mass: per cent by mass;

16) % by volume: per cent by volume.

Section 3. This Statutory Order shall not apply to:

1) fuels intended for processing prior to final combustion,
2) fuels to be processed in the refining industry,
3) fuels intended for the purposes of research and testing,
4) fuels used by warships and other vessels on military service,
5) fuels used for the purpose of securing the safety of a ship or saving life at sea, or
6) fuels used in a ship necessitated by damage sustained to it or its equipment, provided that all reasonable measures are taken after the occurrence of the damage to prevent or minimise excess emissions and that measures are taken immediately to repair the damage.

Subsection 2. This Statutory Order shall not apply to coal used in power plants with an electric capacity above 25 MW and a thermal capacity above 50 MW.

Subsection 3. This Statutory Order shall not apply to fuels used in non-road mobile machinery and agricultural tractors or diesel fuels as defined in the Statutory Order on the quality of petrol, diesel fuels and gas oil intended for use in motor vehicles etc.

Subsection 4. This Statutory Order shall not apply to:

1) heavy fuel oils used in combustion plants which are considered new plants in accordance with the Statutory Order on the limitation of emissions of certain pollutants into the air from large combustion plants (bekendtgørelse om begrænsning af visse luftforurenende emissioner fra store fyringsanlæg), and which comply with the sulphur dioxide emission limits for such plants set out in the said Statutory Order;

2) heavy fuel oils used in combustion plants which are considered existing plants in accordance with the Statutory Order on the limitation of emissions of certain pollutants into the air from large combustion plants, the SO2 emissions of which, according to the plant's environmental approval, may not exceed 1,700 mg/Nm3 at an oxygen content in the flue gas of 3% by volume on a dry basis, and which, from 1 January 2008, comply with the sulphur dioxide emission limits set out for the plants mentioned in No. 1;

3) heavy fuel oils used in other combustion plants which are covered by Annex 1 or 2 of the Statutory Order on Approval of Listed Activities (Approval Order) (bekendtgørelse om godkendelse af listevirksomhed), but which are not covered by Nos. 1 or 2, where the approved sulphur dioxide emissions from those combustion plants do not exceed 1,700 mg/Nm3 at an oxygen content in the flue gas of 3% by volume on a dry basis.

Subsection 5. This Statutory Order shall not apply to heavy fuel oils used in combustion plants at refineries if:

1) the combustion plant is covered by Annex 1 or 2 of the Statutory Order on Approval of Listed Activities (Approval Order), but is not covered by the Statutory Order on the limitation of emissions of certain pollutants into the air from large combustion plants, and the approved monthly average of emissions of sulphur dioxide averaged over all plants in the refinery, irrespective of the type of fuel or fuel combination used, does not exceed 1,700 mg/Nm3, or

2) the combustion plant is covered by and complies with the regulations in the Statutory Order on the limitation of emissions of certain pollutants into the air from large combustion plants.

Section 4. Chapter 3 shall apply to Danish ships in Danish and international waters, foreign ships in Danish territorial waters, offshore platforms in Danish territorial waters and in the exclusive economic zone, as well as ports and suppliers of marine fuels.

Chapter 2

Fuels other than marine fuels

Section 5. Fuels, other than marine fuels, may only be used if they comply with the following limit values for sulphur:

1) 0.9% by weight for coal and other solid fossil fuels,
2) 1.0% for petcoke,
3) 1.0% by weight for heavy fuel oils, and
4) 0.1% by weight for gas oil.
Subsection 2. The limit values for solid fossil fuels, cf. subsection 1, Nos. 1 and 2, apply to fuels with a water content of 0% by weight and are reduced proportionally where the water content is above 0% by weight.

Section 6. The Danish Environmental Protection Agency may approve the use of coal and other fossil fuels with sulphur contents higher than those stated in Section 5.

Subsection 2. Applications for approvals in accordance with subsection 1 shall be in writing. The application shall be submitted to the Environmental Protection Agency. The application shall state why for technical reasons it is necessary to use such fuels in the production, or it shall include substantiation that the use of a desulphurisation plant or other method will achieve a reduction of the sulphur dioxide emissions equal to the use of fuels that comply with the limit values in Section 5.

Chapter 3
Marine fuels

Use

Section 7. Marine fuels with a sulphur content exceeding 4.5% by weight shall not be used; cf. however Sections 11-13.

Subsection 2. Furthermore, marine fuels shall comply with the following requirements:
1) if the fuel consists of mixtures of hydrocarbons from refining of crude oil, only small quantities of additives with the intention of improving performance may be added;
2) the fuel shall be free from inorganic acid;
3) the fuel shall not contain any added substance or chemical waste which:
   a) endangers the safety of ships or has a negative influence on the performance of the machinery, or
   b) is harmful to the crew, or
   c) may generally contribute to further air pollution.

Subsection 3. Subsection 1 does not apply to marine fuels used on board offshore platforms to:
1) incinerate substances originating exclusively and directly from exploration, extraction and the associated treatment on the platform of mineral deposits in the seabed, including the incineration of hydrocarbons and excavations, mud and drilling fluids when drilling and test drilling, as well as incineration arising from critical situations;
2) operate combustion engines or turbines used exclusively for the exploration, extraction and related treatment on the platform of mineral deposits from the seabed.

Placing on the market

Section 8. Marine fuels may not be placed on the market if their sulphur content exceeds:
1) 0.1% by weight for marine gas oil,
2) 1.5% by weight for marine diesel oil, and
3) 4.5% by weight for other marine fuels.

Subsection 2. Any person who places marine fuels on the market shall, when delivering to ships with a gross tonnage greater than 400 and to offshore platforms, provide a bunker delivery note with the information stated in Annex 1 to the person mentioned in Section 10 and, together with said person, sign and seal a representative sample of the fuel that has been delivered and subsequently hand over that sample to said person.

Subsection 3. Any person who places marine fuels on the market shall keep the signed bunker delivery note, cf. Section 10, for at least three years from the time of the delivery. The note shall be shown upon demand.

Subsection 4. The regulations in subsections 2 and 3 shall not apply to ships engaged in coasting trade.

Section 9. Any person who places marine fuels on the market shall provide written information to the Environmental Protection Agency including the person’s name, address, Central Business Register (CVR) number and Central Business Register Production unit (CVR-P) number no later than 14 days prior to commencing marketing.

Obligations upon receipt of fuel

Section 10. The master of the ship, the operator of the offshore platform or any other person thus authorised shall sign for the receipt of the delivery of the fuel on a copy of the bunker delivery note. The original bunker delivery note shall be retained under the control of the ship or offshore platform for at least three years from the time of delivery. The note shall be shown upon demand.

Subsection 2. The master of the ship, the operator of the offshore platform or any other person thus authorised shall, on the sample, receipt for the sample of the fuel delivered, mentioned in Section 8. The fuel sample shall be kept by the ship or the offshore platform until the fuel in question has been consumed, but in no case less than 12 months following the time of delivery.

Subsection 3. The regulations in subsections 1 and 2 shall not apply to ships only engaged in coasting trade.
Tightened regulations for the use of marine fuels

Section 11. Passenger ships operating regular services to and from ports in the European Community shall not use marine fuels with sulphur contents higher than 1.5% by weight.

Section 12. Marine fuels with sulphur contents higher than 1.5% by weight shall not be used in Sulphur Oxide Emission Control Areas.

Subsection 2. If the ship also uses fuels with sulphur contents higher than that mentioned in subsection 1, sufficient time shall be allowed for the fuel system to be fully flushed in order for the low-sulphur fuel to be used immediately upon entrance into a Sulphur Oxide Emission Control Area.

Subsection 3. The Baltic Sea Area and the North Sea Area, cf. Section 5 of the Marine Environment Protection Act, are Sulphur Oxide Emission Control Areas.

Section 13. Fuel with a sulphur content exceeding 0.1% by weight may not be used on inland waterway vessels and ships at berth.

Subsection 2. Ships at berth shall use a fuel complying with the requirements in subsection 1 as soon as possible after arrival at berth and as late as possible before departure.

Subsection 3. Subsection 1 shall not apply:
1) whenever, according to published timetables, ships are due to be at berth for less than two hours;
2) to inland waterway vessels that carry a certificate proving conformity with the International Convention for the Safety of Life at Sea, 1974, as amended, while those vessels are at sea; and
3) to ships at berth which switch off all engines and use shore-side power.

Section 14. The changeover between fuels complying with the requirements of Sections 11-13 and other marine fuels shall be recorded in each case in the ship’s logbook, including information on the content of the fuel mentioned in Sections 11-13 in each tank with this content, as well as the date, time and the ship’s position. Recording shall be for such time where the fuel system has been rinsed through.

Emission abatement technology

Section 15. The Environmental Protection Agency may, in cooperation with other Member States of the European Community, permit trials of ship emission abatement technologies and in that connection allow for derogation from the requirements in Sections 11-13.

Subsection 2. An application for a permit pursuant to subsection 1 shall be in writing. The application shall be submitted to the Environmental Protection Agency. The application shall contain information detailed enough for assessing whether the terms mentioned in subsection 3 can be complied with.

Subsection 3. A permit shall include terms stipulating that:
1) all ships involved shall install tamper-proof equipment for the continuous monitoring of flue gas emissions and use it throughout the trial period,
2) no ships involved shall achieve emission reductions which are poorer than those achieved through the limits on sulphur in fuel specified in Sections 11-13,
3) there shall be proper waste management systems in place for any waste generated by the emission abatement technologies throughout the trial period, and
4) assessment of the impact on the marine environment, particularly ecosystems in enclosed ports, harbours and estuaries shall be made throughout the trial period.

Subsection 4. The Environmental Protection Agency may set out further terms than those mentioned in subsection 3.

Section 16. The permit pursuant to Section 15 shall state the earliest date at which the trial may commence and by when it shall be completed. The date of entry into force shall be at least six months after the Environmental Protection Agency has granted the permit, and the permit may be given for a period of no longer than 18 months.

Subsection 2. The person responsible for the trial shall, no later than six months after completion of the trial, and at his or her own expense, make full results publicly available and submit these to the Environmental Protection Agency and the European Commission.

Section 17. The Environmental Protection Agency may grant derogation from the requirements on sulphur contents set out in Sections 11-13 if the ship is using emission abatement technology approved in accordance with the regulations in Directive 1999/32/EC, as amended by Directive 2005/33/EC.

Subsection 2. An application for a permit pursuant to subsection 1 shall be in writing. The application shall be submitted to the Environmental Protection Agency. The application shall contain information detailed enough for assessing whether the terms mentioned in subsection 3 can be complied with.

Subsection 3. A permit shall include terms stipulating that:
1) the ship shall continuously achieve sulphur emission reductions which are at least equivalent to those achieved through the limit values specified in Sections 11-13,
2) the ship shall be fitted with continuous emission monitoring equipment, and
Section 20. The municipality shall supervise:

1) compliance with the limit values set out in Section 5, and
2) compliance with the terms stipulated in connection with permits pursuant to Section 6.

Section 21. The supervision activities referred to in Section 20, subsection 1, Nos. 1 and 2, shall be carried out by
Environment Centre Roskilde, Environment Centre Odense and Environment Centre Aarhus when competent in accordance with the Approval Order to approve or supervise the enterprise in question.

Section 22. Supervision and control of compliance with the provisions set out in Sections 7-19 of this Statutory Order shall be carried out by the Environmental Protection Agency with assistance from the Danish Maritime Authority with regard to supervision of ships and the Danish Energy Authority with regard to supervision of offshore platforms.

Section 23. The reference method adopted for determining the sulphur content of liquid fuels shall be that defined by:

1) DS/EN/ISO 8754 (1992) and PrEN ISO 14596, for heavy fuel oil and marine fuels, and

Section 24. Complaints against decisions made under this Statutory Order by the Environmental Protection Agency cannot be brought before any other administrative authority.

Section 25. Unless a more severe penalty is due under other legislation, fines shall be imposed for any person who:

1) uses fuels, including marine fuels, with a sulphur content higher than the values mentioned in Sections 5, 7, 11-13 and 28, subsections 3 and 4, without a permit pursuant to Sections 6, 15 or 17;
2) violates the terms stipulated in a permit pursuant to Section 6, 15 or 17;
3) places on the market marine fuels with a sulphur content exceeding the one mentioned in Section 8, subsection 1;
4) omits to produce a signed bunker delivery note or a signed and sealed representative fuel sample or to keep or show a copy of these, or provides incorrect information in the note, cf. Section 8;
5) omits to notify as stipulated in Sections 9 or 29;
6) omits to sign for or keep a bunker delivery note or sign or keep a fuel sample in accordance with Section 10;
7) omits to record or states incorrect information in the ship's logbook as described in Section 14;
8) omits to report on trials in accordance with Section 16, subsection 2;
9) discharges waste from emission abatement technology contrary to the provisions of Section 18; or
10) omits to establish a reception scheme in accordance with Section 19.

Subsection 2. The penalty may increase to imprisonment for up to two years if the violation was committed intentionally or through gross negligence and if said violation:
1) has damaged the environment or produced a risk of damage, or
2) has resulted in or aimed at a financial benefit, comprising also financial savings, for the person in question, or for others.

Subsection 3. Subsection 2 shall not apply to violations committed from foreign ships. The penalty may be increased to imprisonment for up to two years for violations committed from foreign ships in Danish territorial waters, and if the violation was intentional and resulted in serious contamination of the marine environment.

Subsection 4. Criminal liability may be imposed on companies, etc. (legal persons) under the rules of Chapter 5 of the Danish Criminal Code.

Chapter 6

Entry into force and transitional provisions

Section 26. This Statutory Order shall enter into force on 1 January 2007, cf. however Sections 27 and 28.

Subsection 2. The following Statutory Orders shall be repealed:
1) Statutory Order No. 532 of 25 May 2001 on limiting the sulphur content of certain liquid and solid fuels.
2) Statutory Order No. 1110 of 17 November 2005 on limiting the sulphur content etc. in fuel oils used on board ships and on offshore platforms.

Section 27. Section 22 shall apply from 1 January 2007.

Subsection 2. Until 1 January 2007, the supervision activities mentioned in Section 20 shall be carried out by the county council for enterprises covered by the approval competence of the county council in accordance with Section 3 of Statutory Order No. 943 of 16 September 2004 on Approval of Listed Activities (Approval Order), and for enterprises run by the municipal council.

Section 28. The regulations applying to Sulphur Oxide Emission Control Areas, cf. Section 12, subsection 3, shall apply to the North Sea area from 11 August 2007.

Subsection 2. Section 8, subsection 1, No. 1, and Section 13 shall apply from 1 January 2010.

Subsection 3. Notwithstanding Section 5, subsection 1, No. 4, gas oil with a sulphur content of up to 0.2% by weight may be used until 1 January 2008.

Subsection 4. Until 31 December 2007, marine gas oil with sulphur contents higher than 0.2% by weight shall not be used. Between 1 January 2008 and 31 December 2009, marine gas oil with sulphur contents higher than 0.1% by weight shall not be used.

Section 29. Enterprises already placing marine fuels on the market when this Statutory Order enters into force shall submit their name, address, Central Business Register (CVR) number and Central Business Register Production unit (CVR-P) number to the Environmental Protection Agency no later than 1 February 2007.

Danish Ministry of the Environment, 14 December 2006

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Annex 1

Information to be included in the bunker delivery note:

1. Name and IMO No. of the recipient ship.
2. Name of the port.
3. Date of the commencement of the delivery.
4. Name, address and phone number of the supplier of fuel oil to ships.
5. Name(s) of the product.
6. Quantity in tonnes (metric tonnes).
7. Density at 15º C, kg/m³.
8. The sulphur contents of the fuel oil in question (% by weight).
9. A statement signed by the fuel oil supplier representative confirming that the fuel oil delivered is in compliance with the requirements in Section 7, subsection 1, or Section 12, subsection 1, and Section 7, subsection 2.
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