

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 1

At the eighth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8 February 1973 item 1.513 was amended and adopted. The following wording is therefore immediately effective:

Item 1.513

para. 2

sentence 1

Where this is not practicable in messes and living quarters, only steel pipes with welded pipe connections or pipes of equivalent materials with equivalent pipe connections are permitted in this area.

In galleys, pantries and provision rooms these pipes must be laid in pipe tunnels. In addition, the pipe tunnel must be provided with effective drainage to a point accessible for inspection outside these rooms. Pipes passing vertically through galleys, pantries and provision rooms must be made of steel with welded connections unless these pipes are made of equivalent material with equivalent pipe connections and are sheathed to prevent mechanical damage. Sections of pipe in the rooms referred to are also to be subjected to a pressure test which must correspond to the static pressure in the system as a whole.

An equivalent material is deemed to be any material possessing the same characteristics in regard to mechanical strength, impermeability and ability to withstand high and low temperatures, as required in the spaces in which it is to be used, and the same ability to withstand all the aggressive media normally used in the sanitary area.

An equivalent pipe connection is deemed to be a connection which is impermeable from inside and is resistant to ageing.

Evidence of the above is to be submitted.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

2nd Amendment

At the ninth meeting of the Expert Committee - § 7 of the Decree on Accommodation of Crew Aboard Merchant Vessels of February 8, 1973, No. 1.123, para 1, 1.132 para 1, and 1.132 para 2.3 were amended and/or re-worded.

The following amendments are valid with immediate effect:

Ad. No. 1.123 para.1

Behind "6. in office rooms: like under 1." there will be added:

"It should be aimed at that the relative humidity in the spaces mentioned in items 1., 2, 3. and 6. does not range below 35 per cent, with a reference temperature of 22° or 21° respectively with ships mentioned in item 1 b."

Ad No. 1.132 para 1

Following the Table "air changes per hour", the following para. will be inserted:

"The air exchange rates of the Table relate to the minimum bottom surfaces fixed in No. 1.24 of the Annex to the Decree at a space height of 2, 00 m. It is admissible to fall short of these air exchange rates, proportionately to the cubic capacity, in bigger spaces; however, six times an air exchange in accommodations and dormitories is the minimum."

Ad No. 1.132 para 2.3

The former version will be replaced by the following one:

"The design of an air conditioning plant has to take into account the climatic conditions of the vessel's envisaged trading area. This requirement is considered as having been met if at least the following values are adhered to:

primary data:	outside climate:	+ 35° C and 70 % relative humidity
	inside climate:	+ 29° C and approx. 50 % relative humidity
secondary data:	outside climate:	+ 28° C and 80 % relative humidity
	inside climate:	+ 24° C and approx. 50 % relative humidity.

The plant is to be dimensioned in accordance with the primary data and for 100 % outside air. The refrigerator and the air coolers are to be designed such that the secondary data can be adhered to. It is to be aimed at that in all spaces directly air conditioned, except for the pantries and dry provisions spaces, the values as listed in the table below are reached:"

The Table "ambient air conditions" remains unchanged.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendments 3 and 4

At the thirteenth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8 February 1973

1. item 1.14 was reworded:

The following revised wording becomes effective immediately:

”The requirements under item 1.14 are deemed to be met if the rules set out in subsection 'a. Protection against Noise' of Section VIII of the Accident Prevention Regulations for Enterprises engaged in Ocean Navigation (UVV See), in the form valid at the time, are complied with.”

2. item 2.2 was supplemented:

The supplementary matter relates to ships with keels laid on or after 1.1.1983.

Add to Para. 3

The drinking water transfer facilities are to be fitted with a transfer flange connection in accordance with DIN-ISO 5620, May 1982 edition.

Add to para. 4

The drinking water hose coupling called for in sentence 2 must take the form of a counter-flange to the transfer flange connection in Accordance with DIN-ISO 5620, May 1982 edition.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 5

At the fifteenth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8 February 1973 item 1.132 para. 1 was supplemented and reworded.

All the regulations relating to item 1.132 paras. 1 - 3, including Amendment 2 of 25.8.1976 - which therefore ceases to apply to item 1.132 - are set out below.

Amendment 5 takes effect immediately.

Item 1.132

para. 1

The requirement for sufficient air renewal is deemed to be met if, having regard to the number of persons and the space concerned, an external air flow equivalent to at least 50 a³ /h/person is maintained in accommodation and sleeping quarters and in other areas (i.e. areas with additional troublesome sources of odour). The proportion of recirculated air shall not exceed a maximum figure of 20%, and the minimum external air flow is to be maintained.

The air changes indicated in the following Table are reference values which take account of the minimum external air flow mentioned above.

The amount of air flowing into and from each space should be balanced in order to avoid uncontrolled draughts.

Air contamination occurring in any space is to be dealt with in the area of origin by suitable structural means (e.g. traps or partitions) or ventilation technology (e.g. exhaust hoods or controlled air flow from the intake to the exhaust outlet) and disposed of without detriment to other spaces.

Space	Mechanical ventilation		Air changes per hour				Minimum external air flow m ³ /h/person
	supply air	exhaust air	air-conditioning systems with max. 20% recirculated air		air-conditioning systems without recirculated air component		
	supply air	exhaust air	supply air	exhaust air	supply air	exhaust air	
Living/ sleeping quarters	8	-	8	-	6	-	50
Messes, saloons, offices	15	15	15	15	12	12	50
Corridors	-	5	-	-	-	-	-
Hospitals	12	12	12	12	12	12	50
Galleys							
cold area	15	-	15*	-	12*	-	50
hot area	25	40	25*	40*	28*	40*	-
Pantries	25	25	20	20	15	15	50
Sanitary facilities	-	10	-	-	-	-	-
Laundries	15	15	-	-	-	-	50
Drying rooms	25	30	-	-	-	-	-
Laundry/ drying room combined	15	20	-	-	-	-	50
Dry provision rooms	10 and or	10	10 and or	10	5 and or	5	-

* These values apply only if the galley is directly connected to the air-conditioning system.

The air change rates in the Table are related to the minimum floor areas specified in item 1.24 of the appendix to the Regulations with a room height of 2,00 m. In the case of larger rooms, the air change rates may be reduced in proportion to the cubic capacity of the room, although the reduced figure shall not be less than four air changes per hour for accommodation and sleeping quarters.

The minimum external air flow is to be maintained.

The air change/fresh air rates for pantries may be applied to galley in which the characteristic galley fumes do not occur (no hot areas), e.g. where pre-prepared food is used exclusively.

Air conditioning systems and mechanical ventilation equipment must be so designed that an air speed of 0,2 m/s is not exceeded in the occupancy area of accommodation and sleeping quarters, messes, day rooms, sick rooms and offices. The occupancy area is deemed to be the area in which persons normally sit or lie.

Para. 2

1. The tropics comprise the area lying between the Tropics of Cancer and Capricorn.

The areas with similar climatic conditions include:

The Gulf of California
 The Gulf of Mexico and the waters round Florida
 The Red Sea
 The Persian Gulf and the Northern Arabian Sea
 The East China Sea to south of the Japanese islands
 The Northern Pacific up to latitude 30° north

2. The rooms mentioned in § 29 items 1, 2, 3 and 6 and dry provision rooms must either be directly connected to an air conditioning system installed on board or be fitted with air conditioning systems. The rooms mentioned in § 2, items 4 and 5 must be supplied at least by air exchange from air conditioned rooms. Such air exchange may take place via corridors situated in the air conditioned area.
3. The design of an air conditioning system must take account of the climatic conditions of the ship's planned range of service. This requirement is deemed to be satisfied if the following values are maintained as a minimum requirement:

Primary data:	External climatic conditions:	+35° C and 70% relative humidity
	Internal climatic conditions:	+29° C and approxim. 50% relative humidity
Secondary data:	External climatic conditions:	+28° C and 80% relative humidity
	Internal climatic conditions:	+24° C and approxim. 50% relative humidity

The system is to be rated in accordance with the primary data and for 100 % external air. The cooling plant and the air coolers are to be so designed that the secondary data can be maintained. The desired objective is that the values given in the following Table should be attained in all directly air conditioned rooms with the exception of pantries and dry provision rooms:

Air conditions in room

External air temperature	Room air temperature	Relative humidity in room
below +25°C	+22°C	35% to 70%
+25°C	+22°C	35% to 70%
+28°C	+23°C	35% to 65% *
+30°C	+23,5°C	35% to 65% *
+32°C	+24°C	35% to 60% *
+35°C	+25°C	35% to 60% *
+40°C	+26,5°C	35% to 55% *
+45°C	+28°C	35% to 50%
from +45°C	+30°C	35% to 40%

* Values correspond to DIN 1946, sheet 3

para. 3

Living quarters within the meaning of para. 3 are accommodation and sleeping quarters, messes and other day rooms, sick rooms, galleys and offices.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 6

At the twenty-fourth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8th February 1973 the Amendment 5 dated 30.11.1984 item 1.132 para. 1 was supplemented as follows:

Amendment 6 takes effect on 1st July 1993.

Item 1.132

Para. 1

For installation in living and sleeping quarters, floor, wall or ceiling air supply units with controls adjustable to zero by the cabin occupant (crew member), if he so desires, may be used.

If such units are installed, it has to be guaranteed (ensured) through constructive measures, e.g. by means of automatic air balance fittings, that even after closing more than half of all air supply units in the living and sleeping quarters, the air flow at other units of the relevant ventilation system does not increase by more than 10 %.

In the calculations for heating and air-conditioning, the individual air flow rate reduction to less than a sixfold exchange is not permitted.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 7

At the twenty-fourth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8 February 1973 item 2.3 was revised as follows:

Amendment 7 takes effect on 1st July 1993.

Item 2.3

Para. 1

Drinking (Potable) water obtained by means of distillation or other suitable processes must meet the requirements of § 11 of the Federal Law on Infectious Disease. It must contain no substances not authorised in the publication of the revised Drinking Water Order of 05th December 1990 (Federal Gazette I p. 2612). This means that agents added to the sea water and to the heating systems of sea water evaporators must not reduce the quality of drinking water from the health point of view, even if a leakage occurs. The ship owner must obtain verification of this from the manufacturer of the additives.

As regards the listed approved additives at Annex 3 of the above mentioned Order (Rule) under No. 4, it is a fact that drinking water production plants on board merchant ships are not continuous operation and that consequently the description "systematic use" is incorrect. From the point of view, disinfection of evaporator distillate with ionised silver is permissible.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 8

At the twenty-eighth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crew members on merchant vessels of 8 February 1973 item 1.22 para. 1 was supplemented as follows:

Amendment 8 takes effect immediately.

Item 1.22

Para. 1

For health reasons, a berth should not be installed in thwartship direction on sailing ships.

Exception from this regulation will only be granted if an additional sleeping place (e.g. a transom berth) in fore-to-aft direction is available in the same cabin.

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 9

At the twenty-ninth meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crewmembers on merchant vessels of 8th February 1973 item 2.3 para.1 was supplemented as follows:

Amendment 8 takes effect on 1st January 1998.

Item 2.3

Para. 1

An UV-sterilizer has to be install behind the pressure tank or behind the feeding pump if no pressure tank is provided.

Any bypassing at the UV-sterilizer is not permitted. The installation direction shall be vertical in order to avoid deposits inside the ducts as much as possible. Continuous monitoring of the UV-intensity has to be provided.

An accoustic alarm signal is to be activated or the system to be shut off automatically, if the UV-dosage is to low (falls to less than the minimum threshold value).

The power of the UV-lamp must be so strong that during its hole (entire) service life the dosage, with a wave length of 253,7 nanometer, never falls below 16 mWs/cm².

(See also DIN 86283 part 1)

Technical Regulations for the Construction and Equipment
of Accommodations Aboard Seagoing Ships

Amendment 10

At the thirty-third meeting of the Technical Committee on § 7 of the Regulations for the accommodation of crewmembers on merchant vessels of 8th February 1973 item 1.123 para.1 was supplemented as follows:

Amendment 10 takes effect on 1st November 2001.

Item 1.123

Para. 1

The requirement (requirement for 24° C) is not valid for sanitary rooms with the supply air directly from the belonging living room.