(9 November 1990 – to date)

PERISHABLE PRODUCTS EXPORT CONTROL ACT 9 OF 1983

Government Notice 444 in Government Gazette 8575, dated 2 March 1983. Commencement date: 1 April 1984. [Proc. 49, Gazette No. 9141, dated 30 March 1984]

REGULATIONS RELATING TO THE EXPORT OF PERISHABLE PRODUCTS, 1983

Government Notice R917 in Government Gazette 9211, dated 4 May 1984. Commencement date: 4 May 1984.

As amended by:

Government Notice R1817 in Government Gazette 9899, dated 23 August 1985. Commencement date: 23 August 1985.

Government Notice R2595 in Government Gazette 12829, dated 9 November 1990. Commencement date: 9 November 1990.

The Minister of Transport Affairs, in terms of section 25 of the Perishable Products Export Control Act, 1983 (Act 9 of 1983), has made the regulations contained in the Schedule hereto.

TABLE OF CONTENTS

Chapter II. Loading and Carrying Instructions

Part I.

17. Instruments required
18. Deodorisation of ship's holds
19. Precooling of ship's holds
20. Shipment under in-transit sterilization to United States of America, Taiwan and New Zealand
21. Stowage of odoriferous material

Part II. During period of loading

22. Cooling
23.
24. Protection against sun, wind and rain
25. Walking boards
26. Dunnage in conventional refrigeration vessels for stowage of deciduous and citrus fruits packed in cartons
27. Stowage of melons (ventilated)
28. Stowage of refrigeration cargo in hatch squares
29. Dunnage on cold bulkheads when making ventilated shipments
30. Stowage of eggs, cheese and butter in cartons

Part III. During the voyage and at the time of discharge

31.
32. Time allowed for bringing loaded ship's holds to carrying temperatures
33. Operation of fans
34. Operation of air-change vents
35. Raising of temperatures in plum and citrus decks
36. Raising of temperature in egg chambers or containers three days prior to discharge to avoid moisture condensation
37. Maintenance of temperatures
38. Intervals in discharge operations
39. Stowage of potatoes or onions
40. Stowage of citrus in non-refrigerated decks without forced ventilation

Part IV. Carrying temperatures

41.
42.
43. Penalties

Part V. Container ships with centralised refrigeration system

Section I.

44. Inspection of reefer and fruit containers
45. External condition

CHAPTER I

1. In these regulations the expression "the Act" shall mean the Perishable Products Export Control Act, 1983 (Act 9 of 1983), and any expression to which a meaning has been assigned in the Act shall bear such meaning and, unless the context otherwise indicates -

“approved cold storage" shall mean cold storage approved by the Board in terms of regulation 11;

“carrying temperature” shall mean the temperature which is indicated under the heading 'Commodity temperature' in the third column of the table to regulation 41;

(Definition of “carrying temperature” inserted by regulation 2 of GNR 2595 of 1990)

"chairman" shall mean a chairman in terms of section 6 of the Act or a chairman of a committee, as the case may be;

"classification society" shall mean a society registered with the International Association of Classification Societies and acknowledged by the Board;

"committee" shall mean a committee in terms of section 11(e) of the Act;

"container" shall mean standardised intermodal equipment intended for carrying cargo at sea, on land or in the air, consisting of a large metal or glass-reinforced plastic box in which several packages can be stowed, and capable of being loaded, stowed and discharged as a unit;

"conventional refrigeration vessel" shall mean a vessel designed to carry perishable products in a refrigerated atmosphere in break bulk or on pallets;

"cooling plant" shall mean a facility designed to reduce the flesh temperature of perishable products from the ambient temperature to the carrying temperature prescribed in regulation 41 and to maintain the latter temperature;

"loading completed" shall mean the point at which a vessel, having loaded all the products that it is engaged to carry or can physically carry, closes its main hatch covers;

"logbook" shall mean the document or register, with all pages numbered consecutively in which particulars of the temperature of the product or the space and all operational details of the cooling machinery are recorded at regular intervals;

"natural ventilator" shall mean an apparatus allowing a ship's hold to be naturally and non-mechanically ventilated;

"properly precooled" shall mean the condition of a consignment or space the whole of which registers the carrying temperature prescribed in regulation 41;

"representative" shall mean a member, official or employee of the Board acting on a written authorisation of the Board;

"satisfactory storage conditions", in relation to a perishable product, shall mean the conditions under which these regulations require such product to be stowed prior to export;

"temperature tolerance time (TTT)" shall mean the length of time for which a perishable product may be left at a specified temperature with no further cooling and with no marked rise in temperature that could lead to any deterioration of such product.

THE BOARD AND COMMITEES

2.

(1) The Board shall cause proper minutes to be kept of the proceedings at each of its meetings and of the proceedings at each of the meetings of any committee of the Board.

(2) The name of each member present at a meeting of the Board or of a committee of the Board shall be recorded in the minutes of such meeting.

(3) A member of the Board who opposes a majority resolution at a meeting of the Board or of a committee of the Board may require his vote to be recorded in the minutes of that meeting together with a brief statement of the reasons therefor.

(4) At every ordinary meeting of the Board –

(a) the minutes of the preceding ordinary meeting and of any special meeting subsequent to such ordinary meeting shall be read and, if found to be correct by the Board, confirmed by the signature of the chairman or, if he is absent, of the member presiding in terms of section 12(3) of the Act;

(b) the minutes of any meeting of any committee subsequent to the last ordinary meeting of the Board which have been confirmed as correct by the committee concerned shall be considered and confirmed or otherwise dealt with by the Board and entered in the minute book of the Board.

3.

(1) The members of a committee shall elect one from among their number to preside at the meeting.

(2) In the absence of the chairman of a committee from a meeting the members present at such meeting shall elect one from among their number to preside thereat.

4. At a meeting of a committee -

(1) a decision by the majority of its members present at such meeting shall be a decision of such meeting;

(2) a majority of the members of such committee shall constitute a quorum.

EXPORTERS

5.

(1) Any person intending to export any perishable product to a place outside the Republic shall apply in writing to the Board for registration as an exporter.

(2) Every application addressed to the Board in terms of subregulation (1) shall contain the applicant's full name and address, the port(s) of shipment which he intends to utilise, the perishable product which he

intends to export and the name and address of his agent, if he intends to employ an agent, and the Board may call upon the applicant to furnish any further information which it deems to be necessary .

(3) After consideration of such application together with any further information that may be required by the Board, and after the applicant has lodged a guarantee with the Board designed to defray the expenses referred to in section 14 of the Act, the Board may register such applicant as an exporter.

(4) The Board may, on the application of an exporter who has discharged his liabilities to the Board, cancel the registration of such exporter.

6. Any person intending to export any perishable product to a place outside the Republic shall notify the Board of his intention to do so and the Board may, in its discretion, allow such exporter's agent to do so on the exporter's behalf.

7. Such information as the Board may require in respect of a perishable product which an exporter intends· to export shall be furnished by him to the Board within such period as the Board may determine for each export transaction.

8. If the information referred to in regulation 7 is submitted to the Board by an exporter after the close of bookings for the vessel on which such exporter intends to export, the Board may refuse to accept his booking for such vessel.

9.

(1) The Board, if it deems this necessary in the interest of exporters, may at any time refuse to accept a particular perishable product for export.

(2) The Board shall not exercise its power of refusal in terms of subregulation (1) unless each exporter of the perishable product concerned has been given three days' prior notice of the board's decision and of the date on which such decision will come into effect: Provided that, if owing to circumstances over which the Board has no control such notice cannot be given, the Board may exercise such power without giving such notice.

FOREIGN PERISHABLE PRODUCTS

10. Any foreign perishable product from a country outside the Republic of South Africa which, owing to the nature and structure of the refrigeration vessel in which it is to be stowed, is stowed in the same space, or receives refrigeration from the same source, as any South African perishable product shall be deemed to be a perishable product in terms of the Act.

COLD STORES

11.

(1) All cold stores used for the precooling or storage of perishable products destined for export shall be subject to the approval of the Board.

(2) In deciding whether or not to approve a cold store in terms of subregulation (1), the Board shall take into consideration the certificate of the authority concerned relating to the insulation, air circulation, refrigerating capacity and suitability of handling facilities of that cold store.

(3) The Board, if it considers that an approved cold store is no longer suitable for the precooling or storage of a perishable product destined for export, or that any of the requirements of the Board or these regulations in respect of the control or management of an approved cold store is not being complied with, or at the request of the owner or lessee of an approved cold store, may at any time withdraw his approval in respect of such cold store.

12.

(1) An accurate logbook of temperatures and such other records as the Board may in writing from time to time require to be maintained, shall be maintained in each approved cold store and shall at any time be available for perusal by an officer of the Baord *[sic]* or of the Department of Agriculture.

(2) The recording of temperature in such logbook shall take place under such conditions and at such times as the Board, in each particular case, may from time to time require.

13.

(1) The quantity of a perishable product destined for export which may be stored in a given space in an approved cold store shall be determined by the Board in each particular case.

(2) No product other than a perishable product of a particular class and kind shall, save with the consent of the Board, be placed in an approved cold store.

(3) The method of handling a perishable product, in and out of an approved cold store, shall be determined by the Board in each particular case.

(4) A representative of the Board shall at all times have access to every approved cold store.

14. The Board shall allocate all shipping space for perishable products in such manner as to ensure that each exporter of such perishable products· receives a fair share of the shipping space available.

LEVIES

15.

(1) The levy payable in terms of section 17 of the Act by an exporter in respect of a perishable product shall be paid at the office of the Board in Cape Town immediately on shipment of that perishable product.

(1A) The following fees shall be payable in respect of services rendered by the Board and shall, after the services concerned have been rendered, forthwith be payable at the office of the Board in Cape Town:

(a) Inspection of containers for the transport of perishable products:

R7,00 per integral container,
R3,50 per reefer and fruit container.

(Regulation 15(1A) added by GNR 1817 of 1985)

Bill of lading·

(2) Every shipping company· accepting perishable products in its shipping space shall without delay deliver to the Board a non-negotiable copy of the bill of lading for such perishable products.

(3) The bill of lading so delivered shall be deemed to be sufficient evidence that such shipment of a perishable product has taken place.

APPEAL

16.

(1) An appeal in terms of section 15 of the Act shall be lodged –

(a) by submitting in writing a notice of appeal in threefold to the General Manager, Perishable Products Export Control Board, P.O. Box 6770, Roggebaai, 8012, setting out the act or decision being appealed against;

(b) by fully stating in such notice the grounds of appeal and enclosing any documents relating to the matter.

(2) The appellant shall be notified of the decision of the Minister at the address stated in the notice of appeal.

CHAPTER II
LOADING AND CARRYING INSTRUCTIONS

PART I
INSTRUMENTS REQUIRED

17.

(1) Every ship's hold intended for the carriage of perishable products shall be equipped with accurate thermometers for recording air delivery temperatures, air return temperatures and cargo space temperatures.

(2) Instruments for measuring the concentration of carbon dioxide gas shall be provided in such hold when fruit cargoes are carried therein.

(3) The accuracy of the instruments referred to in subregulation (1) and (2) shall be checked by the Board not less than once every year.

DEODORISATION IN SHIPS' HOLDS

18.

(1) Every ship's hold into which perishable commodities are to be stowed shall be clean and free of any odours before cooling commences and such precautions as the Board may require in any particular case shall be taken where a hold is used for the stowage of all perishable products.

Fungal contamination and sterilization of ships' holds

(2) If any trace of fungal growth is observed in the decks on permanent gratings or on the sides of deckheads, this shall be washed down with a 0,5 % solution of Sodium Orthophenylphenate (SOPP): Provided that, as an alternative, the burning of Tifume tablets containing Thiabendazole (TBZ) shall be permissible: Provided further that one Tifume tablet shall be used for every 100 m^3 of empty space.

PRECOOLING OF SHIPS' HOLDS

19. Every ship's hold shall be precooled to the carrying temperature prescribed in regulation 41 and held at such temperature for at least 24 hours prior to commencement of loading.

SHIPMENT UNDER IN-TRANSIT STERILIZATION TO UNITED STATES OF AMERICA, TAIWAN AND NEW ZEALAND

20. When sterilization is required during shipment –

(a) the utmost cleanliness to the satisfaction of the Board shall be achieved;

(b) all holds shall be precooled to -1°C (30°F) and be held at such temperature for at least 48 hours prior to commencement of loading;

(c) gratings shall be in a good state of repair and placed in the proper design pattern;

(d) internal dunnage consisting of 19 mm x 19 mm (¾" x ¾") laths shall be used in the cargo where necessary and such dunnage shall be precooled during the preparation of the holds except where otherwise provided in these regulations or where holds have been exempted from the use of dunnage in terms of instructions given before shipping commences;

(e) all thermometers shall, on arrival of the vessel at the port of loading be loosened in their brackets in readiness for calibration at the melting point of ice;

(f) any defects in the electronic temperature-recording equipment shall be reported to the Board in good time for repairs to be undertaken;

(g) such special carrying-temperature instructions as the Board may determine for a specific shipment shall be adhered to.

STOWAGE OF ODORIFEROUS MATERIAL

21. Odoriferous material such as antimony ore, ox hides, sheepskins, fish meal, tobacco or dried fish shall not be stowed in the same hatch as perishables: Provided that airtight spaces may be given such special consideration as the Board may prescribe in any particular case.

PART II
DURING PERIOD OF LOADING

COOLING

22. During breaks in loading the Board may direct that all holds containing perishables shall be closed and cooled with fans at full speed until such time as the Board may direct that loading may be proceeded with.

23. The temperature as measured by the cargo space thermometers and the air return thermometers in a hold where chilled perishable products are stored shall not be allowed to drop more than 1 °C (1,8 °F) below the carrying temperature prescribed in regulation 41: Provided that no such limitation shall apply to deep-frozen perishable products.

PROTECTION AGAINST SUN, WIND AND RAIN

24. Cargo being precooled to the temperature prescribed in regulation 41 shall at all times be protected against the direct rays of the sun, strong winds or rain by the use of portable hatch screens, tarpaulin covers or otherwise.

WALKING BOARDS

25. Walking boards shall be used in all ship's holds during loading.

DUNNAGE IN CONVENTIONAL REFRIGERATION VESSELS FOR STOWAGE OF·DECIDUOUS AND CITRUS FRUITS PACKED IN CARTONS

26. The following procedure shall be applied for the stowage of precooled fruit in cartons which are precooled to the temperature prescribed in regulation 41:

(a) Dunnage shall be used on floors and shall consist of 75 mm x 50 mm (3" x 2") bearers placed at intervals of approximately 75 cm (2' 6") and running in the direction of the airflow, and dunnage of 100 mm x 25 mm (4" x 1") shall be placed transversely on such bearers to coincide with the ends of such cartons.

(b) Each such carton shall· be placed in its length in the direction of the airflow.

(c) Break dunnage of 100 mm x 25 mm (4" x 1") shall be placed flat athwartship on every sixth tier of cartons to stabilise the load: Provided that this requirement shall not apply where only nine tiers are stowed or where cartons are stowed higher than nine tiers in hatch squares with coamings.

(d) On decks capable of accommodating more than nine tiers, break dunnage shall be used as follows:
10 High - break on fifth tier.
11 High - break on sixth tier.
12 High - break on sixth tier (maximum height for apple cartons).
13 High - break on sixth tier.
14 High - break on fifth tier and 10th tier (maximum height for citrus and pear cartons).

(e) If a false deck is used in a deep hold, break dunnage of 100 mm x 25 mm (4" x 1") flat shall be used at a convenient working height below and above such false deck.

(f) Where such vessel's sides have a pronounced flare, bridging break dunnage of 100 m *[sic*] x 25 mm (4" x 1") shall be placed flat arthwartship*[sic]* into the wings to stabilise the load: Provided that, where necessary, breaking dunnage shall be placed into the wings on every tier· or on every second tier, depending on such flare.

STOWAGE OF MELONS (VENTILATED)

27. When melons are stowed on deck or below deck, 19 mm x 19 mm (¾" x ¾") dunnage shall be placed vertically between the sides of every two columns of cases: Provided that, if forced air circulation is not available below deck, dunnage shall be placed vertically both between the ends and between the sides of every two columns of cases.

STOWAGE OF REFRIGERATION CARGO IN HATCH SQUARES

28.

(1) Where air delivery vents are fitted in hatch coamings or in hatch trunks, no refrigerated· cargo shall be stowed above a level of 15 cms (6") below the lower edges of such air delivery vents.

(2) In order to keep fruit cartons away from exposed high heat leakage areas and provide additional flow of air past the warm surfaces, as an alternative to dunnage gates in hatch coamings, the staggered stow or fishtail stow may be adopted for the row of cartons immediately adjacent to the coaming; Provided that the balance of such cartons in the hatch shall be stowed in the normal rectangular fashion.

DUNNAGE ON COLD BULKHEADS WHEN MAKING VENTILATED SHIPMENTS

29. When cases or cartons are stowed for ventilated shipments, 25 mm x 25 mm (1" x 1") dunnage shall be placed against all cold bulkheads: Provided that such dunnage shall be secured in such manner as not to be displaced during the voyage.

STOWAGE OF EGGS, CHEESE AND BUTTER IN CARTONS

30.

(1) The floor dunnage shall be the same as prescribed in regulation 26 for deciduous fruit and citrus packed in cartons.

(2) 19 mm x 19 mm (¾" x ¾") dunnage shall be placed vertically after every second column of cartons.

PART III

DURING THE VOYAGE AND AT THE TIME OF DISCHARGE

31. When loading is completed, refrigeration shall be commenced at once, the air delivery temperatures prescribed in regulation 41 to be adhered to and steps to be taken to ensure that no air delivery temperature is reduced below the minimum laid down.

TIME ALLOWED FOR BRINGING LOADED SHIPS' HOLDS TO CARRYING TEMPERATURES

32. The carrying temperature as measured by the cargo space thermometers shall in all cases be reached throughout the hold within 48 hours after the commencement of refrigeration and, when such temperature has been reached, air shall be delivered at approximately 0,5°C (1°F) lower than such carrying temperatures.

OPERATION OF FANS

33.

(1) Fans shall be run at full speed until cooling to the carrying temperature prescribed in regulation 41 is completed and thereafter at a speed which will ensure that the temperature range of ± 0,5°C (± 1°F) is maintained in all cargo spaces throughout the voyage.

(2) Where possible, fans shall be run in reverse, at frequent intervals, to maintain uniformity of temperature, and such operational change shall be recorded in the logbook.

OPERATION OF AIR-CHANGE VENTS

34.

(1) All spaces containing citrus shall be ventilated continuously by the use of air-change vents to keep the concentration of carbon dioxide gas below one per cent at all times: Provided that the prescribed carrying temperature shall be maintained throughout.

(2) All spaces containing avocados, mangoes, pineapples or plums shall be ventilated with the air-change vents fully open for at least two hours daily during the cool hours of the morning; Provided that such vents shall be kept fully open continuously if the Chief Engineer so directs.

(3) All spaces containing melons shall be ventilated continuously with the air-change vents fully open.

(4) The hours of operation of the air-change vents shall be recorded in the logbook daily together with the carbon dioxide percentage in the ship's hold.

RAISING OF TEMPERATURES IN PLUM AND CITRUS DECKS

35. The temperatures prescribed for plum and citrus decks or containers shall be communicated in writing to the Master by the Board before the voyage, and shall be attained as rapidly as possible and shall be maintained accurately to within the limits specified.

RAISING OF TEMPERATURE IN EGG CHAMBERS OR CONTAINERS THREE DAYS PRIOR TO DISCHARGE TO AVOID MOISTURE CONDENSATION

36.

(1) To minimise condensation, at the time of discharge, on egg cargoes carried at 0 °C (32 °F), the temperature of the decks shall be raised to above 4,5 °C (40 °F), but not above 10°C (50 °F), during the period of warm weather in the United Kingdom and Continent of Europe (that is, June to October arrivals): Provided that such warming shall be accomplished only during the last three days of the voyage and shall not expose the cargo to the external air, which could possibly cause condensation.

(2) When shipping to the Far East and Middle East, the temperature during the last three days of the voyage shall throughout the year be raised to above 4,5 °C (40 °F), but not above 10 °C (50 °F): Provided that in the case of a vessel discharging at more than one port en route, the temperature shall be raised to 4,5 °C (40 °F) three days prior to discharge at the first port of call and thereafter be maintained at 4,5 °C (40 °F) for the rest of the voyage.

MAINTENANCE OF TEMPERATURES

37.

(1) Unless otherwise specified the temperature in all decks or containers shall be maintained as prescribed in regulation 41 until the time of discharge, and the temperatures in all decks or containers shall be recorded in the logbook at least once in every four hours: Provided that an exporter of perishable products may request the Board in writing to allow the shipment of a perishable product at a temperature which is not in accordance with the carrying temperature as prescribed in regulation 41 and the Board may, if it is of the opinion that there are sufficient acceptable reasons for the deviation from the carrying temperature thus prescribed, on any such request allow shipment at such requested carrying temperature.

(Regulation 37(1) amended by regulation 3 of GNR 2595 of 1990)

(2) All shipping lines concerned shall, as soon as may be practicable after the completion of a voyage, return all logbooks to the General Manager of the Board, P.O. Box 6770, Roggebaai, 8012, and no shipping line shall in any circumstances furnish such logbooks or disclose any details therefrom to any person or organisation.

(3) Representatives of the Board shall at all reasonable times have access to the temperature logbooks of ships and their holds to make observations or take samples during discharge.

INTERVALS IN DISCHARGE OPERATIONS

38. During intervals in discharge operations, all spaces containing perishables shall be closed down and cooling shall be continued at the carrying temperature prescribed in regulation 41.

STOWAGE OF POTATOES OR ONIONS

39. When potatoes or onions are carried overseas and no refrigeration is applied, they shall be stowed in well-ventilated holds and under the conditions of stowage set forth below:

(1) Where potatoes or onions are exported in pockets, the following stowage method shall be adopted:

(a) Stowage shall be on well-placed floor dunnage, which shall consist of 100 mm x 25 mm (4" x 1") plank dunnage laid athwartship on 75 mm x 50 mm (3" x 2”) bearers placed at intervals of approximately 75 cm (2' 6") and running in the direction of the airflow, and the first layer of pockets to be stowed across the planks and further layers to be stowed “criss-cross";

(b) pockets shall be stowed in not more than 14 layers: Provided that above the fifth and ninth layers of pockets two layers of plank dunnage shall be laid, each such layer running in a different direction: Provided further that the overall height of such potato stowage, including all dunnage, shall not exceed about 2,4 m (8 feet) regardless of the height of the space in which the cargo is to be stowed: Provided further that nothing shall be stowed above such potatoes even where excessive head room is left;

(c) pockets shall be stowed on the floor dunnage so as to leave a vertical gap of at least 15 cm (6 inches) at every 2,4 m (8 feet) both in the length and breadth of the stack: Provided that the stowage when completed, shall resemble a series of cube-shaped stacks of 2,4 m (8 feet) high and 2,4 m (8 feet) length and breadth, separated by 15 cm (6 inch) gaps vertically: Provided further that the said stacks shall be bonded together and made stable by allowing the break dunnage, at the fifth and ninth layers, to be continuous across the said gaps.

(2) Where potatoes or onions are exported in cartons, the following stowage methods shall be adopted:

(a) Floor dunnage shall be 75 mm x 50 mm (3” x 2”) bearers placed at intervals of approximately 75 cm (2’ 6”) and running in the direction of the airflow, and 100 mm x 25 mm (4” x 1”) dunnage shall be placed on the said bearers at centres to coincide with the ends of the cartons: Provided that the length of each carton shall run in the direction of the airflow;

(b) cartons shall be stowed in not more than 10 layers, and break dunnage 100 mm x 25 mm (4" x 1”) flat athwartship shall be used at half height;

(c) where the ship's sides have a pronounced flare, a bridging break dunnage of 100 mm x 25 mm (4" x 1”) shall be placed flat athwartship into the wings to stabilise the load: Provided that, where necessary, breaking dunnage shall be placed on every tier or on every second tier into the wings, depending on such flare;

(d) when stowing cartons, 19 mm x 19 mm (¾" x ¾”) dunnage shall be placed vertically after every third column of cartons.

(3) Potatoes shall not be stowed in the same space as onions, nor in a space containing tea, tobacco, or similarly tainting commodities.

(4) Should potatoes or onions be carried on deck, stowage methods be employed generally similar to those prescribed for pockets and cartons, except that height of stowage will necessarily be less: Provided that extra precautions for stability shall be observed and stacks shall be securely lashed down.

(5) In all cases where stowage would otherwise be exposed to the sun's rays, tarpaulins or awnings shall be employed.

(6) Tarpaulins or awnings shall never be laid directly on such stacks, but be held clear by about 15 cms (6") and for voyages on which heavy seas are likely to be encountered, no such stacks shall be stowed on forward decks or hatches.

(7) When potatoes or onions are stowed in spaces below deck without refrigeration, the following procedures shall be adopted:

(a) Air-change vents or natural ventilators shall be fully open all the time during the voyage;

(b) continuous ventilation of such holds shall be carried out by means of the fans for as long as the temperature of the intake air is equal to or less than the temperature of the exhaust air;

(c) when the inlet air temperature rises to a point which is higher than the outlet air temperature, continuous ventilation shall be stopped: Provided that, while this condition prevails, the fans shall be run for approximately one hour during the coolest time of the day irrespective of temperatures;

(d) when conditions outside the ship's hold change to provide a cooling effect once more within such hold, the fans shall be run continuously again;

(e) when the air temperature in the ship's hold drops below 4,5 °C (40 °F) all ventilation must be stopped until the temperature is higher than 5,5 °C (42 °F), when ventilation shall be commenced;

(f) a daily record shall be kept of temperatures in the ship's hold and of the times of fan operation.

STOWAGE OF CITRUS IN NON-REFRIGERATED DECKS WITHOUT FORCED VENTILATION

40. The following procedures shall be adopted for pre-cooled citrus stowage in decks which are not refrigerated and are fitted with natural ventilators only:

(a) Permanent ventilators shall be adjusted to the greatest advantage and shall remain open at all times;

(b) after the first five days the hatch shall be partially opened by removing the corner hatch covers or sliding back the McGregor hatch covers to provide additional exhaust ventilation;

(c) a daily record of air temperatures in the deck shall be kept.

PART IV
CARRYING TEMPERATURES

41. No minimum air delivery temperature specified in the table below shall be maintained for more than five hours within any 12-hour period.

Note.- The said minimum air delivery temperatures are intended merely to serve as a guide to ship's engineers in safeguarding refrigerated cargo from freezing damage. The carrying temperature prescribed should be maintained by means of an air delivery temperature not less than 0,5 °C (1 °F) above the relevant minimum temperature until such time as it is found possible to maintain the carrying temperature with a higher air delivery temperature.

Product		Minimum air delivery temperature	Commodity temperature
(a)	***Deciduous fruits*:**		
	APPLES:		
	Varieties other than Granny Smith	-2 °C (28 °F)	-0,5 °C ± 0,5 °C (31° F ± 1° F)
	Granny Smith	-2 °C (28 °F)	1,5 °C ± 0,5 °C (35° F ± 1° F)
	From the FIRST week in MAY all Granny Smith to be precooled to, and carried at, -0,5 °C (31°F)	-2 °C (28 °F)	Preferably or -0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	APRICOTS	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GRAPES	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PEACHES AND NECTARINES	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PEARS	-2 °C (28 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GIANT PRUNES	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	CHERRIES	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PLUMS (Container service): Early Season: Methley, Beauty, Early Santa Rosa:		
	These plums shall be precooled to -0,5 °C (31 °F) and then shipped into a deck or container precooled to -0,5 °C (31°F). Maintain at -0,5 °C (31 °F) until 48 hours after departure from Cape Town, when the temperature shall be raised as rapidly as possible to 7,5 °C (45 °F) and maintained at 7,5 °C (45 °F)	-1,5 °C (29 °F)	-0,5/7,5 °C ± 0,5 °C (31/45 °F ± 1 °F)
	Midseason (1): When the majority of plums are Santa Rosa, including Eldorado, President, Wickson, Harry Pickstone and Redgold:		
	These plums shall be precooled to -0,5 °C (31°F) and then shipped into a deck or container precooled to -0,5°C (31 °F). Maintain at -0,5 °C (31 °F) until 48 hours after departure from Cape Town, when the temperature shall be raised as rapidly as possible to 7,5 °C (45 °F) and maintained at 7,5 °C (45 °F) for the rest of the voyage	-1,5 °C (29 °F)	-0,5/7,5 °C ± 0,5 °C (31/45 °F ± 1 °F)
	Midseason (2): When the majority of plums are Gaviotas:		
	These plums shall be precooled to -0,5 °C (31°F) and then shipped into a deck or container precooled to -0,5 °C (31 °F). Maintain at -0,5 °C (31°F) until 48 hours after departure from Cape Town, when the temperature shall be raised as rapidly as possible to 7,5 °C (45 °F) and maintained at 7;5 °C (45 °F) for the rest of the voyage	-1,5 °C (29 °F)	-0,5/7,5 °C ± 0,5 °C (31/45 °F ± 1 °F)
	At the end of the season when quantities of Gaviota plums do not warrant a separate deck or container, carry with	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)

	deciduous at -0,5 °C (31 °F) but NEVER with Kelsey at 10 °C (50 °F)		
	Late season: Kelsey and Giant prunes only:		
	These plums shall be precooled to -0,5 °C (31 °F) and then shipped into a deck or container precooled to -0,5 °C (31 °F). Maintain at -0,5 °C (31 °F) until 48 hours after departure from Cape Town, when the temperature shall be raised as rapidly as possible to 10,0 °C (50 °F) for the rest of the voyage The total time for most plums at -0,5 °C shall not exceed 10 days. If plums are accumulated for shipment total time at -0,5 °C and length of voyage shall be taken into consideration. If storage is to exceed 10 days, the matter shall be referred to Management for a decision on carrying temperature	-1,5 °C (29 °F)	-0,5/10,0 °C ± 0,5 °C (31/50 °F)
	Songold, Rubynel, Golden King General: For markets other than those in United Kingdom and Europe:	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	If the voyage is to be shorter than 12 days, Santa Rosa and Gaviota plums shall be carried at 7,5 °C (45 °F) and Kelsey plums at 10°C (50 °F)		7,5 °C or 10° C ± 0,5·°C (45 °F or 50 °F ± 1 °F)
	If the voyage is to be longer than 12 days, the plums shall be shipped and carried at -0,5 °C (31 °F) and the temperature shall be raised to 7,5 °C (45 °F) or 10°C (50 °F) 48 hours after departure from Cape Town	-1,5 °C (29 °F)	-0,5/7,5 °C ± 0,5 °C (31/45 °F ± 1 °F) OR -0,5/10 °C ± 0,5 °C (31/50 °F ± 1 °F)
(b)	***Citrus fruit:***		
	GRAPE FRUIT	Not available	11 °C ± 0,5 °C (52 °F ± 1 °F)
	LEMONS	Not available	11 °C ± 0,5 °C (52 °F ± 1 °F)
	ORANGES	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	ORANGES: GENERAL:		
	During the early part of the season oranges shall be carried at 11 °C/15,5 °C (52 °F/60 °F) for part of the voyage. Instructions will be issued to the Master of the vessel by the Board if this procedure is adopted.		
	ORANGES, GRAPEFRUIT AND LEMONS MIXED		
	If the major portion of the cargo is grapefruit or lemons, the carrying temperature shall be 10°C (50 °F)	Not available	10 °C ± 0,5 °C (50 °F ± 1 °F)
	If the major portion of the cargo is oranges, the carrying temperature shall be 8,5 °C (47 °F)	Not available	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	GRAPEFRUIT, LEMONS AND PINEAPPLES MIXED	Not available	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	TANGERINES	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	SEVILLE ORANGES	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
(c)	***Subtropical fruit:***		

	PINEAPPLES	7,0 °C (45 °F)	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	AVOCADOS	4,5 °C (40 °F)	5,5 °C ± 0,5 °C (42 °F ± 1 °F)
	BANANAS	12,0 °C (54 °F)	13,5 °C ± 0,5 °C (54 °F ± 1 °F)
	MANGOES	10,5 °C (51 °F)	11 °C ± 0,5 °C (52 °F ± 1 °F)
	LITCHIES	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GRENADILLAS	Not determined	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	PAWPAW	8,0 °C (46,5 °F)	10 °C ± 0,5 °C (50 °F ± 1 °F)
	WATERMELONS	2,5 °C (36 °F)	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	MELONS (if carried under refrigeration)	13 °C (55 °F)	14 °C ± 0,5 °C (57 °F ± 1 °F)
	GINGER (fresh-air ventilation is required for one hour in every eight hours)	10 °C (50 °F)	12 °C ± 0,5 °C (54 °F ± 1 °F)
(d)	***Flowers:***		
	CAPE GREENERY AND FERNS	-1,0 °C (30 °F)	1,5 °C ± 0,5 °C (35 °F ± 1 °F)
	CHINCHERINCHEES (if separate space available)	-1,0 °C (30 °F)	1,5 °C ± 0,5 °C (35 °F ± 1 °F)
	If quantities do not warrant separate space, carry with:		
	Oranges	Not available	4,5 °C ± 0,5 °C
	Deciduous fruit or eggs	-1,0 °C (30 °F)	-0,5 °C or 0,0 °C ± 0,5 °C (31 °F or 32 °F ± 1 °F)
	GLADIOLI	-1,5 °C (29 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PROTEAS (if separate space available)	Not available	1,5 °C ± 0,5 °C (35 °F ± 1 °F)
	Otherwise with eggs at 0,0 °C (32 °F)	-0,5 °C (31 °F)	-0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	ORCHIDS	Not available	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	AMARYLLIS BULBS	5,5 °C (42 °F)	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	AZALEA PLANTS	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	STRAWBERRY PLANTS	Not available	0,5 °C ± 0,5 °C (33 °F ± 1 °F)
(c)	***Vegetables:***		
	ASPARAGUS	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	ARTICHOKES	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	AUBERGINES (Brinjals or Egg Fruit)	Not available	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	BEETROOT	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	CAPSICUMS (Green Peppers)	Not available	8,5 °C ± 0,5 °C (47 °F ± 1 °F)
	CARROTS	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GREEN BEANS	5,5 °C (42 °F)	7,0 °C ± 0,5 °C (45 °F ± 1 °F)
	GREEN PEAS	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GEM SQUASHES	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	LEAF VEGETABLES: CABBAGE, CAULIFLOWER, LETTUCE, BRUSSELS SPROUTS, SPINACH, ENDIVES (FRENCH ENDIVES)	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PARSNIPS	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	GARLIC (well cured)	-1 °C (30 °F)	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	otherwise	-1 °C (30 °F)	10 °C ± 0,5 °C (50 °F ± 1 °F)

	TOMATOES (mature, but green in colour)	Not available	12,5 °C ± 0,5 °C (55 °F ± 1 °F)
	TOMATOES (ripe and fully coloured red)	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	COURGETTES (Zucchinis)		
	If separate deck not available, ship at 8,5 °C (47 °F) with pineapples but never at 7,5 °C (45 °F)	Not available	10 °C ± 0,5 °C (50 °F ± 1 °F)
	SWEET POTATOES (fresh air ventilation is required for one hour in every eight hours	13 °C (55 °F)	15,5 °C ± 0,5 °C (60 °F ± 1 °F)
	POTATOES		
	Eating	Not available	5,5 °C ± 0,5 °C (42 °F ± 1 °F)
	Processing	Not available	13 °C ± 0,5 °C (55 °F ± 1 °F)
	Seed	Not available	1,5 °C ± 0,5 °C (35 °F ± 1 °F)
	CELERY	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	MUSHROOMS	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	CUCUMBER	Not available	8 °C ± 0,5 °C (46 °F ± 1 °F)
	LEEKS	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	TURNIPS	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	ONIONS	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
(f)	***Miscellaneous chilled commodities of animal origin:***		
	BACON	-4 °C (25 °F)	-2 °C ± 0,5 °C (28 °F ± 1 °F)
	BEEF (VACUUM PACKED IN CARTONS) CHILLED	-2 °C (28 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	PORK, MUTTON (CHILLED)	Not available	-1,5 °C ± 0,5 °C (29 °F ± 1 °F)
	EGGS - SHELL		
	When shipping to EEC Countries	Not available	8 °C ± 0,5 °C (46 °F ± 1 °F)
	When shipping to countries other than EEC Countries, refer to regulation 36	-1,5 °C (29 °F)	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	HAMS		
	Canned		
	At any temperature within the range of -0,5 °C (31 °F) to 8,5 °C (47 °F)	Not available	-0,5 °C to 8,5 °C ± 0,5 °C (31 °F to 47 °F ± 1 °F)
	Smoked	-4 °C (25 °F)	-2 °C ± 0,5 °C (28 °F ± 1 °F)
	CHEESE	Not available	7,0 °C ± 0,5 °C (45 °F ± 1 °F)
(g)	***Frozen commodities:***		
	Note.- Where frozen commodities are required to be maintained at the lowest possible temperature with a specified maximum container ship's Operators shall be instructed to operate containers at -24 °C (-11 °F).		
	BEEF, PORK, MUTTON, GAME, POULTRY, VEAL	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	BUTTER	No restriction	At the lowest possible temperature with a maximum of -15 °C (5 °F).
	WHALEMEAT	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	FRUIT JUICES AND OTHER FRUIT CONCENTRATES	No restriction	At the lowest possible temperature with a maximum of -20 °C (-4 °F).

	EGG PRODUCTS - FROZEN		
	Whole Egg Pulp	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	Salted Egg Yolk, Sugared Egg Yolk Critical	-15 °C (5,0 °F)	-15 °C to -17 °C (5,0 °F to 1,5 °F)
	QUICK FROZEN FRUITS AND VEGETABLES	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	SPINAL CORDS, PANCREAS GLANDS, OFFAL	No restriction	At the lowest possible temperature with a maximum of -15 °C (5 °F).
	FRESH FISH	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	SMOKED FISH	No restriction	At the lowest possible temperature with a maximum of -18 °C (0 °F).
	ROCK LOBSTER TAILS, LANGOUSTINES, PRAWNS, ABALONE, SHRIMPS, CALAMARI, SQUID, OCTOPUS, CRABMEAT	No restriction	At the lowest possible temperature with a maximum of -20 °C (-4 °F).
(h)	***Miscellaneous chilled commodities***		
	SALTED SNOEK	-1 °C (30 °F)	-0,5 °C ± 0,5 °C (31 °F ± 1 °F)
	SMOKED SNOEK	+1,5 °C (35°C)*[sic]*	+2 °C ± 0,5 °C (36 °F ± 1 °F)
	NUTS		
	Pecan (at any temperature within the range)	Not available	0,0 °C (32 °F) to 10 °C (50 °F)
	FRUIT JUICES AND OTHER FRUIT CONCENTRATES		
	ORANGE	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	APPLE 60/70%	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	APPLE 40/48%	Not available	0,0 °C ± 0,5 °C (32 °F ± 1 °F)
	GRAPEFRUIT SEGMENTS	Not available	4,5 °C ± 0,5 °C (40 °F ± 1 °F)
	CACTUS PLANTS	Not available	5/10 °C (41/50 °F)
	MARGARINE	+1 °C (30 °F)	2 °C ± 0,5 °C (36 °F ± 1 °F)

42. The final Carrying Temperature Instructions Letter issued by the Board to the master of the ship shall be carefully checked against the table in regulation 41 and any deviations from the said schedule shall be brought to the notice of the Board.

PENALTIES

43. Any person -

(a) using for the precooling or storage of a perishable product intended for export a refrigeration space which has not been approved by the Board or in respect of which the Board has withdrawn its approval;

(b) contravening any provision of these regulations;

shall be guilty of an offence and liable on conviction to a fine not exceeding R5 000 or to a period of imprisonment not exceeding three years or to both such fine and such imprisonment.

PART V
CONTAINER SHIPS WITH CENTRALISED REFRIGERATION SYSTEM

SECTION I
INSPECTION OF REEFER AND FRUIT CONTAINERS

44. All fruit and reefer containers shall be cleaned to the satisfaction of the Board and shall, before loading, be subjected to inspection by a representative of the Board.

EXTERNAL CONDITION

45.

(1) The container frame shall be sound to the satisfaction of the Board.

(2) The external panels of no containers shall be damaged in such manner as to affect a proper temperature control within such container.

(3) The doors of each container shall seal correctly and be airtight without the need for excessive force of the locking handles.

(4) The seal toggle of each container shall be in proper working order.

(5) The vent closure valves of each container shall open positively when the locking mechanism is released.

(6) The air coupling contact surfaces of each container shall be smooth.

(7) No pop-rivets shall be allowed on contact surfaces and no scored or damaged contact surface shall be allowed.

INTERNAL CONDITION

46.

(1) The inside of all containers, including those of the styrene monomer type, shall be free of any odour.

(2) The side panels and floors of each container shall be free of any forms of foreign matter - dust, powder, tar or grease.

(3) The 'T' floor sections of each container shall be in good condition so as not to present any ragged edges to the cargo, or obstruct the airflow at floor level.

(4) The air plenum spaces behind the hinged panels at the rear of each container shall be clean and clear of any obstructions, and the said panels shall be dogged securely into the vertical position prior to loading.

(5) The insulation panels of no container shall be damaged.

(6) Each container shall be dry.

SECTION II
INSPECTION OF INTEGRAL CONTAINERS

47.

(1) Each integral container shall have a classification certificate, to be issued by one of the classification societies.

(2) The internal and the external condition of such container shall comply with the requirements prescribed in Section I.

(3) Before loading into any container commences, a representative of the Board shall satisfy himself that such container is hygienic.

(4) Notwithstanding the fact that the responsibility for the correct operation of any container rests upon the shipping line concerned, such container shall, prior to inspection, be set in operation for not less than six hours at the temperature prescribed for the product concerned.

(5) The air-delivery temperature recorder on each container shall be fitted with the correct new card and the spring mechanism of such recorder shall be fully wound.

(6) The thermostat on each container shall be set at the temperature prescribed in regulation 41, and such temperature shall be maintained for the duration of the voyage.

(7) The air-change vents on each container, and also the defreezing and refrigeration system of each container, shall be in proper working order.

(8) Where an importing country imposes specific requirements in regard to a minimum precooling period for any container, the Board shall issue special instructions accordingly.

SECTION III
LOADING OF CONTAINERS

ACCEPTANCE TEMPERATURES

48. Representatives of the Board shall check the temperatures of perishable products immediately before they are loaded into a container.

PROTECTION OF PRODUCT DURING LOADING

49. If an interruption occurs during the loading period, every attempt shall be made to ensure that the product temperature is maintained in the container.

50. Products waiting for containers shall, if possible be returned to cold rooms.

51. Cold room doors and the doors of partially filled containers shall be closed if a pause in loading occurs.

52. The total time for loading shall not exceed one hour in the case of a 6 m (20 ft) container or one and a half hours in the case of a 12 m (40 ft) container.

DOCUMENTATION AND SEALING

53.

(1) Once a container has been filled, the necessary documents shall be completed and such container shall be sealed without delay so that the time without refrigeration is kept to a minimum.

(2) When a large number of containers are worked simultaneously, careful track shall be kept of the documents to ensure that no filled container is overlooked and thus delayed.

AIR CLOSURE VALVES

54. For all frozen products and all deciduous fruit the air closure valves of containers shall remain shut during road transport in order to maintain the product temperature.

55. For all citrus fruit, however, the air closure valves of containers shall remain open for dissipation of CO^2.

56. Both air closure valves of a container shall be opened immediately prior to the loading of such container on to the ship or prior to such container's being connected to temperature holding equipment.

Note.- The set points and control temperatures for clip-on units at South African ports are given in Appendix I.

SECTION IV
AFTER COMPLETION OF LOADING AND DURING TRANSIT

TEMPERATURE TOLERANCE TIME

57.

(1) Perishable products shall be loaded, transported and placed under refrigeration in the ship within the TTT specified in Annexure II.

(2) Under no circumstances shall any refrigerated container on board a vessel remain uncoupled to temperature holding equipment for periods exceeding three hours: Provided that, if the said time limit is exceeded, each container already loaded shall be caused to be coupled individually, i.e. before the whole row has been completed.

MAINTENANCE OF TEMPERATURE AND TEMPERATURE LOGGING
TEMPERATURE SETTING

58.

(1) The temperature controller of each row shall, in the case of chilled products, be set at 0,5 °C below the commodity temperature prescribed in the Carrying Temperature Instructions Letter issued to the master by die Board and, in the case of frozen products, at 1,0 °C below the commodity temperature for frozen products so prescribed.

Minimum air delivery temperature

(2) When the air thermometer indicates that the product temperature is considerably higher than that specified, the delivery air temperature may be reduced to the minimum allowed in order for the carrying temperature to be rapidly regained.

(3) The minimum air delivery temperatures in holds or containers shall not be maintained for periods of more than five hours during any 12-hour period: Provided that when air is being delivered at minimum temperature and the temperature difference between delivery and return has fallen to approximately 2 °C, the product may be assumed to have regained its carrying temperature and air delivery may be set (the temperature difference should then settle at approximately 1°C).

PERSISTANT HIGH TEMPERATURE DIFFERENCE BETWEEN AIR DELIVERY AND RETURN AIR

59.

(1) If, after air circulation has commenced, no reduction in the air return temperature from a container is noted and the temperature difference remains high, the status both of such container and of coupling air closure valves shall be checked by the ship's engineer: Provided that the said comparison of temperatures shall be carried out as soon as possible after loading.

(2) Defective air circulation shall be restored promptly to ensure that the TTT of the cargo is not exceeded.

Temperature logging

(3) During the loading period temperatures shall be logged every two hours.

(4) Once the ship has left port, the logging shall be every four hours until conditions have settled and every eight hours thereafter.

Additional logging

(5) In addition to the temperature logging referred to above, a record shall be kept of all operations, including –

(a) the time at which refrigeration is applied to each row;

(b) the time at which refrigeration is terminated for each row;

(c) CO^2 measurements taken;

(d) operation of fans;

(e) particulars of fresh air make-up;

(f) reports of any breakdowns or stoppages;

(g) the periods during which equipment was out of service;

(h) reports of any circumstances which made it impossible to carry refrigerated cargo under the prescribed conditions.

Log of loading period

(6) Before the vessel leaves the last port of loading, one copy of the temperature log for the loading period at each port shall be submitted to the Board for checking.

OPERATION OF FANS

60. The fans for air circulation within each container shall be at full speed at all times, but shall be reduced to half speed under the following circumstances:

(a) for reefer cargo at carrying temperature;

(b) for fruit cargo, excluding fruit cargo with high respiration such as plums, apricots, avocados and pineapples, providing that the difference between air delivery and return temperatures can be maintained at 1°C;

(c) for unwrapped grapes, unless the air return temperature exceeds the air delivery temperature by more than 2,0 °C.

SECTION V
TAINT CONTROL, CO^2 AND VENTILATION

TAINT CONTROL

61.

(1) Before loading containers into rows previously used for the carriage of products which give off odorous gas, the ship's crew shall ensure that all traces of the tainting gas are removed.

(2) The ship's crew shall also ensure that no fumes, either from deck cargo or exhaust pipes etc., are permitted to be drawn into the fresh air ventilating ducts.

(3) In order that cross-tainting by products may be prevented, no last-minute changes shall be made to the stowing pattern of the ship without the approval of the Board.

CO^2 AND VENTILATION

62.

(1) All fresh products that produce CO^2 through respiration shall be ventilated at a rate that will maintain the CO^2 level below 1 % in the ship's hold or container.

(2) The rate of fresh air introduction shall be one air change every two hours on the basis of the empty volume of the ship's hold or containers, and the actual rate shall be determined from measurements of the CO^2 concentration in the return air ducts.

(3) In view of the adverse effects thereof on temperature and humidity, excessive intake of fresh air shall be avoided.

(4) Continuous air ventilation with partially opened vents shall be preferred to intermittent ventilation with vents fully open.

(5) No ventilation shall be required for frozen commodities.

63. The regulations promulgated by Government Notice R. 1844 of 29 November 1963 are hereby repealed.

APPENDIX I
CLIP-ON UNITS

SET POINTS AND CONTROL TEMPERATURES

Switch position	***Supply air Temperature °C***
1.....	-20
2.....	-18
3.....	-15
4.....	-12
5.....	-0,5
6.....	0
7.....	4,5
8.....	5,5
9.....	7,0
10.....	7,5
11.....	8,5
12.....	10,0

APPENDIX II

TEMPERATURE TOLERANCE TIME FOR PERISHABLES IN CONTAINERS

Product	**Loading temp °C**	**Max. transfer time in hours**	**Expected temp. rise °C**	**Carrying temp. °C**	**Precool period hours**
Appricots *[sic]*	0	6	5	-0,5	24
Peaches	0	6	8	-0,5	24
Plums Dual Temp	0	12	8	7,5/10	Step Control
Plums Low Temp.	0	6	5	-0,5	24
Grapes		12 (Depending on Pliofilm + Sulphur Dioxide Application)			24
Advocados *[sic]*	5,5	3	5	5,5	24
Pineapples.	7,5	6	4	7,5	24
Apples					
Unchilled	Ambient	24	-	-0,5	144
Chilled	0	18	10	-0,5	48
Pears	0	18	5	-0,5	48
Frozen	-25	12	10	-18	48
	-20	6	5	-18	48
	-18	3	3	-18	48