

TARIFF COMMISSION  
GOVERNMENT OF INDIA



REPORT ON THE CONTINUANCE OF  
PROTECTION TO THE CALCIUM  
CHLORIDE INDUSTRY

BOMBAY  
1955

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## **REPORT ON THE CONTINUANCE OF PROTECTION TO THE CALCIUM CHLORIDE INDUSTRY**

### **Previous tariff inquiries**

1. The claim of the calcium chloride industry to protection or assistance was first referred to the Tariff Board by the Government of India in the Department of Commerce by their Resolution No. 218-T(55)/45, dated 3rd November, 1945. The Board in its report submitted on 2nd April, 1946, recommended that a specific protective duty of Rs. 3-4-0 per cwt. should be levied from 1947 on imports of calcium chloride from the United Kingdom and that the duty should remain in force for a period of three years. The Board made a further recommendation that if the c.i.f. price of calcium chloride imported from the United Kingdom went below Rs. 150 per ton, action should be taken under Section 4(1) of the Indian Tariff Act, 1934, to adjust the duty so as to maintain the measure of protection recommended by it. In their Resolution No. 218-T(84)/46, dated 21st December, 1946, issued on the report of the Tariff Board, Government stated that they did not consider that it had been conclusively established that the imposition of a specific protective duty of Rs. 3-4-0 per cwt. on imports from the United Kingdom for a full period of three years was necessary. Pending the collection of more complete data, Government, however, agreed to replace the standard rate of 36 per cent. *ad valorem* and the preferential rates of 24 per cent. on manufactures of the United Kingdom or of a British Colony and 12 per cent. on imports from Burma by specific protective duties of Rs. 4-14-0 per cwt., Rs. 3-4-0 per cwt. and Rs. 1-10-0 per cwt., respectively for a period of one year. The Government of India in the Ministry of Commerce by their Resolution No. 134-T(19)/47, dated 11th June 1948, asked the Tariff Board to inquire into and report on the continuance of protection to certain industries, including the calcium chloride industry. In its report submitted to Government on 11th October, 1948, the Board recommended that protective duties should be continued for a further period of one year, i.e., up to 31st March 1950. The Board undertook an inquiry into the question of continuance of protection to the industry in accordance with the Government of India, Ministry of Commerce, Resolution No. 30-T(1)/48, dated 6th Augdst, 1948. In its report submitted to Government on 16th January, 1950, the Board recommended that protective duties should be continued up to 31st March, 1952. This recommendation was accepted by Government in March 1950. In consultation with the Tariff Commission, protective duties with surcharge of 5 per cent. were further continued from year to year up to 31st December, 1955, by the various Indian Tariff (Amendment) Acts.

### **Present inquiry**

2. The present inquiry was undertaken under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951, under which the Commission is empowered to inquire into and report on any further action required in relation to the protection granted to an industry with a view to its increase, decrease, modification or abolition according to the circumstance of the case.

## Recommendations in previous reports of the Tariff Board on matters other than tariffs

3.1. In its first report (1946) the Tariff Board made the following recommendations on matters other than tariffs :—

- (1) No licences should be given for the import of calcium chloride during the year 1946.
- (2) A ceiling price of Rs. 13-7-0 per cwt. (inclusive of packing) ex-factory should be fixed for the year 1946.
- (3) The question of granting a long-term lease, either to Pioneer Magnesia Works, Ltd., or to any other agency, should be taken up by Government for consideration as soon as possible to facilitate a more economic exploitation of the chemical contents of Kharaghoda bitters.
- (4) There was a reasonable prospect of production of a variety of chemicals at competitive prices if all the operations, including the manufacture of salt and the manufacture of chemicals, were carried on by the same agency. This aspect of the problem, therefore, deserved immediate expert investigation.
- (5) Pioneer Magnesia Works, Ltd., should convert themselves into a public limited company.

3.2. The Government of India announced their decisions on these recommendations in the Department of Commerce Resolution No. 218-T(84)/46, dated 21st December, 1946.

*Recommendation 1.*—Government accepted the recommendation subject to the condition that imports of calcium chloride of a strength greater than 75 per cent. would be permitted to meet the special requirements of consumers.

*Recommendation 2.*—The recommendation was accepted by Government.

*Recommendations 3 and 4.*—Government stated that the matter was under active consideration and it was expected that decision would be reached by April 1947. Government have since granted extension of lease to Pioneer Magnesia Works Ltd., from January 1954 for 25 years.

*Recommendation 5.*—Pioneer Magnesia Works, Ltd., have converted themselves into a Public limited company in 1954.

3.3. In the report submitted by the Tariff Board in 1948, a recommendation was made that Government should provide facilities for transport of limestone, firewood and coal and allocate an adequate quota of steel sheets for packing drums and thereby assist the industry to step up its production. This recommendation was accepted by Government and necessary measures were taken to implement the recommendation.

3.4. In the report submitted to Government in January 1950, the Board made the following recommendations on matters other than tariffs :—

- (1) An early decision should be taken on the question of long-term extension of lease of Kharaghoda bitters to Pioneer

Magnesia Works, Ltd., to enable them to proceed with its scheme of improvement.

- (2) Imports of calcium chloride should be allowed only after taking into consideration the quantum of indigenous production.
- (3) Saurashtra Railways should assist Pioneer Magnesia Works, Ltd., by granting reasonable facilities for transport of limestone.
- (4) The units engaged in the industry should take up with the proper railway authorities the question of reduction of freight on limestone and furnace oil.

3.5. Government announced their decisions on these recommendations in their Resolution No. 37(1)T.B./50, dated 4th March, 1950.

*Recommendation 1.*—It was accepted by Government. A reference has already been made to it in paragraph 3.2.

*Recommendation 2.*—Government stated that it would be implemented so long as import control was exercised for balance of payments considerations.

*Recommendations 3 and 4.*—The units concerned were requested to approach the appropriate railway authorities.

We were informed by Pioneer Magnesia Works, Ltd., that the position in regard to transport of limestone had improved since 1950. As regards the question of reduction of freight on limestone, they stated that they did not approach the railway authorities because of their comparatively low production. They did not also approach the railway authorities for reduction of freight on furnace oil as they had since started using coal in place of furnace oil.

Dhrangadhra Chemical Works, Ltd., informed us that as they were producing calcium chloride as a by-product of soda ash, no limestone was required by them and they did not consume any furnace oil as coal was used as fuel.

### **Method of inquiry**

4.1. On 19th October 1953, a press communique was issued inviting producers, importers, consumers and others interested in the industry to obtain copies of the relevant questionnaires from the Commission's office and submit replies thereto. On 27th September, 1954, a special questionnaire was issued to certain ice factories and refrigeration units. A list of those to whom questionnaires were issued and of those from whom replies were received is given in Appendix I. The Indian Chemical Manufacturers' Association, Calcutta, was addressed for information on the various aspects of the industry. The Industrial Adviser (Chemicals), Development Wing of the Ministry of Commerce and Industry was requested to furnish a memorandum on the present position of the industry and the desirability of continuing protection to it. Information was obtained from the High Commission of India in the United Kingdom regarding f.o.b. prices of calcium chloride in that country.

4.2. Shri S. V. Rajan, Assistant Cost Accounts Officer, examined the cost of production of calcium chloride produced by Pioneer Magnesia Works, Ltd., on 17th September, 1954. He and Shri S. S. Mehta, Technical Director (Chemicals) visited the factory of Dhrangadhra Chemical Works, Ltd., Dhrangadhra, on 27th September, 1954, and examined the cost of production of calcium chloride produced at that factory.

4.3. A public inquiry was held at the Commission's office in Bombay on 14th October, 1954. A list of persons who attended the inquiry is given in Appendix II.

### **Present position of the industry**

5. There are at present two units manufacturing calcium chloride in the country. Pioneer Magnesia Works, Ltd., produce calcium chloride from bitterns obtained from Government Salt Works at Kharaghoda, while Dhrangadhra Chemical Works, Ltd., produce calcium chloride from the effluent of their soda ash plant. Pioneer Magnesia Works, Ltd., have been granted by Government a fresh lease for 25 years from January 1954 to utilise all the bitterns remaining after the extraction of salt from the brine in the salt pans at Government Salt Works at Kharaghoda. They have to pay royalty to Government on magnesium chloride and magnesium sulphate at the rate of 2½ per cent. on the ex-works naked selling price and on all other products or their derivatives at the rate of 1 per cent. on the ex-works naked selling price, provided that royalty payable to Government shall in any year be not less than Rs. 5,000. Pioneer Magnesia Works, Ltd., have also undertaken under the terms of the lease to remodel their works at Kharaghoda according to a phased programme and to lay a pipe line for the whole length of six to six and a half miles of the channel during a period of six to seven years. They are at present manufacturing magnesium chloride and calcium chloride and are investigating the possibility of producing epsom salt from magnesium hydroxide recovered in the process of manufacture of calcium chloride. Dhrangadhra Chemical Works, Ltd., produce calcium chloride from the ammonia still effluent of their soda ash plant. About 120 tons of calcium chloride in the form of effluent are available daily, but most of this effluent is at present going to waste. It was pointed out to us during the public inquiry that the effluent which was going to waste could be profitably used for the production of potassium chloride by the interaction of the still effluent containing calcium chloride with the potassium salts contained in the bitterns. As indigenous production of potassium chloride will make the country self-sufficient, we suggest that Government should investigate the possibility of manufacture of potassium chloride at the two soda ash plants in the country at reasonable cost.

### **Domestic demand**

6. In its 1950 report, the Tariff Board estimated the domestic demand for calcium chloride during the next three years at a maximum of 1,500 tons per annum. We have received varying estimates of demand from different sources. The Development Wing of the Ministry of Commerce and Industry has estimated the current demand at 800 tons and the future demand at 1,200 tons per annum. Pioneer Magnesia Works, Ltd., have estimated the current demand at 850

tons and the future demand at 1,000 tons, while Dhrangadhra Chemical Works, Ltd., have estimated the current as well as future demand at 1,000 tons per annum. The other estimates received by us vary from 700 to 1,050 tons per year. A fair estimate of the domestic demand can be made on the basis of indigenous production and imports over a period of years. The indigenous production and imports of calcium chloride during the years 1950, 1951, 1952 and 1953 were as follows:—

	1950 (tons)	1951 (tons)	1952 (tons)	1953 (tons)
Indigenous production . . . . .	1,345.00	959.00	193.00	733.00
Imports . . . . .	59.25	5.45	14.50	1.20

The average of the sum total of indigenous production and imports during these four years works out to 827 tons per year. If the indigenous production and imports for the previous years, i.e., 1948 and 1949 are also taken into account, the average works out to 812 tons per year. All these estimates were discussed at the public inquiry. The representative of Pioneer Magnesia Works, Ltd., informed us that the bulk of the consumption of calcium chloride is for purposes of refrigeration. He further stated that a tendency was growing to use common salt in place of calcium chloride at some of the ice factories and cold storage and refrigeration units because common salt was available at a much lower price than calcium chloride. It was pointed out that apart from the corrosive effect of salt on refrigeration plant, the use of common salt would entail more expenditure in the long run owing to greater consumption of electric power. We suggest that this aspect should be examined carefully by persons in charge of ice factories, and cold storage and refrigeration units before adopting or continuing the use of common salt in place of calcium chloride. The representative of Pioneer Magnesia Works, Ltd., informed us that they had recently started supplying 6 tons of calcium chloride per month to one of the oil refineries and that the demand of the oil refining industry would be about 240 tons per year when the other two refineries start working. He further stated that calcium chloride was required by rayon plants for refrigeration, and that this demand was expected to increase in the future owing to expansion of the rayon industry and that they were investigating the possibility of calcium chloride being used by coal mines. Taking all these factors into consideration, we estimate the demand in 1955 at 950 tons. The demand is likely to increase to 1,100 tons per year in the course of the next three years.

### Domestic production

7.1. The present rated capacity of Pioneer Magnesia Works, Ltd., is about 1,000 tons per annum while that of Dhrangadhra Chemical Works, Ltd., is 1,125 tons per annum. The latter is estimated on the basis of operating the plant for 9 months in a year at the rate of 125 tons per month. Dhrangadhra Chemical Works, Ltd., informed us that they could increase production up to 1,500 tons per annum with the existing equipment by operating the plant throughout the year. Their cost of production during the rainy season would however be higher as solar evaporation would not then be possible. In case there



is an increased demand for calcium chloride, both the units can increase their capacity to a large extent as the equipment required is simple and could be fabricated locally and as ample supplies of raw materials are available at both the factories.

7.2. The following statement gives the production of calcium chloride by Pioneer Magnesia Works, Ltd., and Dhrangadhra Chemical Works, Ltd., during 1950, 1951, 1952, 1953 and 1954:—

	1950 (tons)	1951 (tons)	1952 (tons)	1953 (tons)	1954 (tons)
Pioneer Magnesia Works, Ltd.	594	651	193	369	359
Dhrangadhra Chemical Works, Ltd.	751	308	..	364	165
<b>TOTAL</b>	<b>1,345</b>	<b>959</b>	<b>193</b>	<b>733</b>	<b>524</b>

It will be seen from the above figures that there is a wide gap between the existing capacity and the actual production. This has been explained by the producers as being due to lack of sufficient demand.

#### Raw materials

8. The principal raw materials used by Pioneer Magnesia Works, Ltd., in the manufacture of calcium chloride are bitterns and lime. Bitterns are available from Government Salt Works at Kharaghoda while limestone is obtained from Porbunder, which is at a distance of nearly 150 miles from Kharaghoda. Limestone is converted into lime at the factory by burning it with coal. Dhrangadhra Chemical Works, Ltd., do not require bitterns or limestone as calcium chloride is produced by them from the effluent of their soda ash plant. Coal is required by Pioneer Magnesia Works, Ltd., as well as Dhrangadhra Chemical Works, Ltd., for evaporation of the solution of calcium chloride. Both the units have stated that the railway freight is high. Pioneer Magnesia Works, Ltd., have also pointed out the difficulties arising from transshipment at Viramgam from metre gauge to broad gauge.

#### Quality of indigenous product

9.1. The opinions received by us showed that the quality of indigenous calcium chloride was suitable for purposes for which it was used and that the quality was generally satisfactory. A few ice manufacturers, however, stated that the quality of indigenous calcium chloride was much inferior to that of the imported product. One of the defects pointed out by them was that the indigenous calcium chloride was blackish in colour. The representative of Pioneer Magnesia Works, Ltd., admitted that calcium chloride produced by them was not as white as the imported product and stated that this was due to its packing in iron containers. He explained that owing to climatic conditions, black sheets used for packing become rusty and this in turn affects the colour of calcium chloride. We understand however that imported calcium chloride is also packed in iron containers and that no deterioration is noticed in the quality of calcium chloride produced by Dhrangadhra Chemical Works, Ltd., although it is packed in iron containers. The representative of Pioneer Magnesia Works Ltd., has however assured us that they will take necessary precautions to avoid such deterioration in colour in future. The representative of Dhrangadhra Chemical Works Ltd., stated that calcium

chloride produced by them was as white as the imported product and that they had received no complaint regarding its quality. From the evidence before us, we are satisfied that the quality of the indigenous calcium chloride is generally satisfactory and that necessary steps are being taken by Pioneer Magnesia Works, Ltd., to remove the defect in regard to its colour.

9.2. In their written memorandum Pioneer Magnesia Works, Ltd., stated that they were producing calcium chloride of 80 to 85 per cent.  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$  solid-fused grade, which is equivalent to 60—64 per cent.  $\text{CaCl}_2$ . The representative of the firm informed us at the public inquiry that the percentage of calcium chloride was now 67.5  $\text{CaCl}_2$ . The representative of Dhrangadhra Chemical Works, Ltd., stated that they adopted the standard for calcium chloride, of Imperial Chemical Industries (India) Ltd., which is free from magnesium chloride and contained 70—75%  $\text{CaCl}_2$ . Calcium chloride produced by Pioneer Magnesia Works, Ltd., contains more moisture than the calcium chloride produced by Dhrangadhra Chemical Works, Ltd., and although the representative of Pioneer Magnesia Works, Ltd., contended that this would not cause corrosion of the iron sheet used for packing, there is no doubt that to the extent that it contains more moisture, its consumption in ice manufacture, etc., would proportionately be more.

9.3. We understand that the Indian Standards Institution has not yet evolved standard specifications for calcium chloride produced in the country. The value of standard specifications from the point of view of maintaining the standard of quality and having a uniform system of expressing the purity of the product cannot be stressed too strongly. We recommend that steps should be taken by the Institution to formulate standard specifications for the indigenous calcium chloride in consultation with the industry as early as possible.

### Imports and import control policy

10. The following table shows imports of calcium chloride from 1950 to 1954 (January—June) :—

Year	Quantity (cwt.)
1950 . . . . .	1,185
1951 . . . . .	109
1952 . . . . .	290
1953 . . . . .	24
1954 (January—June) . . . . .	1

Imports of calcium chloride have been banned since January, 1950. According to the figures published in the accounts relating to the Foreign Trade and Navigation of India, only small quantities of calcium chloride, presumably of the anhydrous variety, have been imported into the country.

### Existing rates of duty

11. Calcium chloride is assessed to duty under item 28 (15) of the First Schedule to the Indian Customs Tariff (39th issue). The relevant extract from the schedule is reproduced below :—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British colony	Burma	
28(15)	Calcium chloride—						
	(a) of British manufacture	Protective.	Rs. 3-4-0 per cwt. plus 5 per cent. of the total duty.	..	..	10½ per cent. <i>ad valorem</i> .	*December 31, 1954.
	(b) not of British manufacture. Provided that calcium chloride manufactured in a British colony shall be deemed to be of British manufacture.	Protective.	Rs. 4-14-0 per cwt. plus 5 per cent. of the total duty.	..	..	10½ per cent. <i>ad valorem</i> .	*December 31, 1954.

\*Protection is further extended up to 31st December, 1955, under Indian Tariff (Third Amendment) Act, 1954.

### Estimate of fair ex-works price

12.1. The Assistant Cost Accounts Officer examined the cost of production of calcium chloride of Pioneer Magnesia Works, Ltd., for the period from 1st January, 1953, to 31st December, 1953 and of Dhrangadhra Chemical Works, Ltd., for two years, from 1st April, 1952 to 31st March, 1953, and from 1st April, 1953 to 31st March, 1954. The cost data compiled by him were discussed with the representatives of the two units separately. As they desire that the details of costs should be kept confidential, we are forwarding the Cost Accounts Officer's report as a separate enclosure to this report†.

In 1950, the cost of production of only one unit, *viz.*, Pioneer Magnesia Works, Ltd., was examined by the Tariff Board and the quantum of protection required by the indigenous industry was determined on the basis of the estimate of fair selling price of calcium chloride produced by that unit. Both the units have since been in regular production, except for one year, *viz.*, 1952 when Dhrangadhra Chemical Works, Ltd., did not produce any calcium chloride. Dhrangadhra Chemical Works, Ltd., have moreover increased their capacity. Pioneer Magnesia Works, Ltd., manufactured 7,380 cwt. of calcium chloride during the year 1953 while Dhrangadhra Chemical Works, Ltd., manufactured 4,987 cwt. of calcium chloride during the year from 1st April, 1953 to 31st March, 1954. The actual cost of production amounted to Rs. 14.86 per cwt. in the case of Pioneer Magnesia Works, Ltd., and Rs. 9.54 per cwt. in the case of Dhrangadhra Chemical

†Not printed.

Works, Ltd. On the basis of the actual cost of production, we have estimated the fair ex-works price for the future for each unit.

12.2. The following statement gives the details of the fair ex-works price for the two units estimated by us for the future :—

	Pioneer Magnesia Works, Ltd.	Dhrangadhra Chemical Works, Ltd.
	Rs.	Rs.
Raw materials . . . . .	3.57	0.40
Conversion charges . . . . .	6.09	5.08
Depreciation . . . . .	1.57	0.36
Packing . . . . .	1.84	1.75
Cost of production . . . . .	13.07	7.59
Interest on working capital . . . . .	0.13	0.07
Return on block . . . . .	1.66	1.00
Fair ex-works price . . . . .	14.86	8.66

The various factors which have been taken into account in estimating the fair ex-works price for the future are explained below :

*Production.*—We have assumed that the demand in 1955 will be 950 tons and that the demand in the country will be met entirely by indigenous production. The representative of Pioneer Magnesia Works, Ltd., informed us that they did not expect to sell more than 450 tons per year. We have, therefore, assumed a production of 450 tons in the case of Pioneer Magnesia Works, Ltd., and of 500 tons in the case of Dhrangadhra Chemical Works, Ltd. In view of the much lower cost of production of Dhrangadhra Chemical Works, Ltd., it is doubtful if Pioneer Magnesia Works, Ltd., would be able to find a market even for 450 tons.

*Raw materials.*—The cost of bitterns and lime in the case of Pioneer Magnesia Works, Ltd., has been assumed to be the same as in 1953. In the case of Dhrangadhra Chemical Works, Ltd., we have estimated the extra expenditure that will have to be incurred for separating the still effluent for the specific purpose of manufacturing 500 tons of calcium chloride in 4 months.

*Power and Fuel.*—We have allowed a lower consumption of electricity and coal in view of the fact that Pioneer Magnesia Works, Ltd., propose to instal a double effect evaporator.—

*Labour charges.*—We have assumed that labour charges will be the same as in 1953 in the case of Pioneer Magnesia Works, Ltd., and that there will be an increase of 50 per cent. over the charges in 1953-54 in the case of Dhrangadhra Chemical Works, Ltd., owing to substantial increase in their production.

*Consumable stores.*—They have been estimated on the basis of assumed production.

*Establishment and overheads*.—In the case of Dhrangadhra Chemical Works, Ltd., these have been calculated at 1 per cent. on the basis of the turn over.

*Depreciation*.—Depreciation has been allowed according to income tax rates for normal and second shift. In the case of Pioneer Magnesia Works, Ltd., we have taken into account the estimated cost of Rs. 25,000 for the double effect evaporator in calculating the amount of depreciation.

*Packing charges*.—In the case of Pioneer Magnesia Works, Ltd., we have assumed that packing charges will be the same as in 1953. In the case of Dhrangadhra Chemical Works, Ltd., we have assumed that 4 cwt. drums will be used for packing and that the cost of packing in such drums will be the same as in 1953-54.

*Interest on working capital*.—The working capital has been taken to be equivalent to 3 months' cost of production and interest at 4½ per cent. is allowed thereon.

*Return on block*.—Return has been allowed at 10 per cent. on the original value of the assets used in the manufacture of calcium chloride. In the case of Pioneer Magnesia Works, Ltd., the value of the block has been increased by the estimated cost of the double effect evaporator.

12.3. The representatives of Pioneer Magnesia Works, Ltd., and Dhrangadhra Chemical Works, Ltd., contended that allowance should be made for freight disadvantage when comparing their fair ex-works price with the landed cost of imported product in ports. We have assumed that so far as sales to inland places are concerned neither Pioneer Magnesia Works, Ltd., nor Dhrangadhra Chemical Works, Ltd., will have any special disadvantage. For sales to port towns, we have estimated the disadvantage on account of railway freight at Rs. 2 per cwt.

12.4. For the purpose of comparison with the c.i.f. price of imported calcium chloride, we have adopted the fair ex-works price for the future estimated by us in the case of Dhrangadhra Chemical Works, Ltd., for the following reasons :

(1) The cost of production of calcium chloride at the factory of Dhrangadhra Chemical Works, Ltd., is much lower than that of calcium chloride produced by Pioneer Magnesia Works, Ltd. The cost of raw materials in the case of Pioneer Magnesia Works, Ltd., comprising bitterns and lime is much higher than the cost of raw material in the case of Dhrangadhra Chemical Works, Ltd., which consists of still effluent from their soda ash plant. The cost of this raw material is negligible. Moreover the fuel required by Dhrangadhra Chemical Works, Ltd., is substantially less due to the higher initial concentration of calcium chloride solution and to the use of solar evaporation. We have been informed by Pioneer Magnesia Works, Ltd., that when re-organization of their works which will include the installation of a new plant is carried out and magnesium hydroxide which is at present going to waste is utilised for the manufacture of epsom salt, the cost of production of calcium chloride will go down considerably. The manufacture of epsom salt from magnesium hydroxide is still in the laboratory stage and it is not, therefore, possible to anticipate at present whether production of epsom salt on

commercial scale will be economical and what the effect of manufacture of epsom salt and other marine chemicals will be on the cost of production of calcium chloride.

(2) Since there is a unit manufacturing calcium chloride at a much lower cost and it has a capacity to meet the entire requirements of the country, it would not be fair to consumers that they should be required to bear the burden of protection based on the higher cost of production of another unit.

(3) The demand for calcium chloride will be stimulated if the selling price is based on the lower cost of production.

### C.i.f. prices and landed costs without duty

13. Owing to the ban on imports, we could not obtain c.i.f. prices of recent consignments of calcium chloride imported into the country. We have, however, obtained estimates of c.i.f. prices based on the latest f.o.b. quotations in United Kingdom from Imperial Chemical Industries (India), Ltd., and the High Commission of India in U.K. These are given in Appendix III. These estimates were discussed at the public inquiry and it was agreed that the c.i.f. price of Rs. 13-3-10 per cwt. of calcium chloride solid-fused grade 72—75% should be adopted for the purpose of comparison with the fair ex-works price of the indigenous calcium chloride. Adding clearing charges of Re. 0-8-0 per cwt., the landed cost without duty works out to Rs. 13-11-10 per cwt.

### Comparison of the fair ex-works price with the landed cost without duty

14. A comparison of the fair ex-works price of the indigenous calcium chloride with the landed cost without duty of the imported product is made in the following statement :—

	Rs.	As.	Ps.
(1) C.i.f. price . . . . .	13	3	10
(2) Clearing charges . . . . .	0	8	0
(3) Landed cost without duty . . . . .	13	11	10
(4) Fair ex-works price plus freight disadvantage . . . . .	10	10	6
(5) Difference between (4) and (3) . . . . .	(—)	3	4

### Question of continuance of protection

15. It will be seen from the above statement that the fair ex-works price of the indigenous calcium chloride is less than the landed cost without duty, of the imported calcium chloride. The industry has enjoyed protection for 8 years and during this period proved its capacity to meet the full requirements of the country. We were informed during the public inquiry that common salt was being used in place of calcium chloride by some of the ice manufacturers and owners of refrigeration equipment. This tendency can be checked if the indigenous calcium chloride becomes available at a much lower price than at present. This would be possible if the selling price is based on the fair ex-works price of Dhrangadhra Chemical Works, Ltd., which is much lower than that of Pioneer Magnesia Works, Ltd.

We feel that there is no case for further continuance of protection to the industry and recommend that protection to the calcium chloride industry should not be continued beyond 31st December, 1955.

### **Assistance asked for by the industry**

16.1. Both the units have complained about the high incidence of railway freight on coal and limestone and requested that freight rates should be reduced for transport of both the raw materials and the finished product. Dhrangadhra Chemical Works Ltd., have stated that the supply of wagons for transport of coal is inadequate and Pioneer Magnesite Works Ltd., have represented that considerable difficulty is experienced by them in transshipment at Viramgam from metre gauge to broad gauge. We suggest that the railway authorities should examine these requests and give whatever relief is possible.

16.2. Both the units have requested that as they have surplus capacity, facilities should be afforded to them for building up an export market. They have suggested that assistance should be given by our Trade Representatives abroad, especially in Middle Eastern and Far Eastern countries, to explore the possibilities of developing an export market in those countries. They have also suggested that in any bilateral trade agreement which might be entered into by Government with countries where calcium chloride is not produced, a provision should be made for export of calcium chloride from India to those countries. As these requests are reasonable, we recommend that Government should consider them favourably.

### **Summary of conclusions and recommendations**

17. Our conclusions and recommendations are summarised as under :

(1) The domestic demand in 1955 for calcium chloride is estimated at 950 tons. The demand is likely to increase to 1,100 tons per year in the course of the next three years.

[Paragraph 6.]

(2) The present capacity of the calcium chloride industry is 2,125 tons.

[Paragraph 7.1.]

(3) The production of calcium chloride in the country during 1950, 1951, 1952, 1953 and 1954 was 1,345, 959, 193, 733 and 524 tons respectively.

[Paragraph 7.2.]

(4) The quality of the indigenous calcium chloride is generally satisfactory.

[Paragraph 9.1.]

(5) The Indian Standards Institution should formulate standard specifications for the indigenous calcium chloride in consultation with the industry as early as possible.

[Paragraph 9.3.]

(6) There is no case for further continuance of protection to the industry and protection should not be continued beyond 31st December, 1955.

[Paragraph 15.]

(7) Government should consider favourably the requests made by the industry to develop an export market in foreign countries.

[Paragraph 16.2]

### **Acknowledgements**

18. We wish to express our thanks to the manufacturers, importers and consumers of calcium chloride and the associations who furnished us with detailed information and to their representatives who gave evidence before us.

M. D. BHAT,  
*Chairman.*

B. N. DAS GUPTA,  
*Member.*

C. RAMASUBBAN,  
*Member.*

RAMA VARMA,  
*Secretary.*

BOMBAY,  
1st March, 1955.





## APPENDIX I

[Vide Paragraph 4·1]

*List of persons or bodies to whom questionnaires were issued and those from whom replies or memoranda were received*

\*Those who replied.

†Those not interested.

### PRODUCERS

- \*1. Pioneer Magnesia Works Ltd., Kharaghoda.
- \*2. Dhrangadhra Chemical Works Ltd., Dhrangadhra.
- †3. Vasant Vijay Mills, 470-471, Worli Road, Bombay.
- 4. Bengal Chemical & Pharmaceutical Works Ltd., 94, Chittaranjan Avenue, Calcutta.

### PRODUCER'S ASSOCIATIONS

- \*1. Indian Chemical Manufacturers' Association, Sir Vithaldas Chambers, Apollo Street, Fort, Bombay.
- \*2. The All-India Manufacturers' Organisation, Industrial Assurance Building, Bombay 1.

### IMPORTER

- \*Imperial Chemical Industries (India) Ltd., I.C.I. House, 34, Chowringhee, Calcutta.

### CONSUMERS

- \*1. Polson Ltd., 65-B, Dockyard Road, Mazagaon, Bombay.
- †2. The Kolar Mines Power Station (KGF) Ltd., Oorgaum P.O. (Mysore State).
- \*3. John Taylor & Sons (India) Ltd., Oorgaum (Mysore State).
- 4. Directorate General of Supplies & Disposals, Government of India (Purchase Section), New Delhi.
- \*5. Assam Oil Co. Ltd., Digboi P.O., Upper Assam.
- \*6. The Master, India Security Press, Government of India, Nasik Road, Nasik.
- †7. Mazagaon Dock Ltd., Ballard Estate, Bombay.
- 8. Dhunjibhoy Ice Factory, Mount Road, Mazagaon, Bombay.
- 9. Navasari Electric Supply Co. Ltd., Navasari.
- †10. Blue Star Industries Ltd., 8, Thomas Street, Colaba, Bombay 5.
- 11. Bombay Crystal Ice Works, 179, Moti Saha Lane, Victoria Gardens Post, Bombay 27.
- 12. City Ice Supply & Cold Storage Ltd., 298, Bazar Gate Street, Fort, Bombay.
- 13. Kathiawar Ice Factory, Gokhale Road South, Khedgali, Dadar, Bombay 14.
- 14. Siddly Ice Factory, 505 B, Arthur Road, Tardeo, Bombay.
- \*15. S.I.R. Ice Factory, Whannel's Road, Egmore P.O., Madras.
- \*16. City Ice & Cold Storage Co. Ltd., 12, General Patter's Road, Mount Road, Madras 2.
- \*17. National Ice & Cold Storage Co., 19, Arab Lane, Corner Grant Road, Bombay 7.
- \*18. National Rayon Corporation Ltd., Ewart House, Bruce Street, Bombay.
- †19. Airco Ltd., Arch No. 11, Below Mahalaxmi Bridge, Opp. Dhobiwada Road, Jacob Circle, Bombay 11.
- †20. Standard Vacuum Oil Co., Stanvac Building, Churchgate, Bombay.
- 21. E. H. Gulamhussein Karachiwala, Uderia Street, Chowki Moholla, Bombay 8.
- †22. Grovers Ltd., 222, Dr. Annie Besant Road, Bombay.
- \*23. Light Foot Ice & Cold Storage, Hansraj Lane, Byculla Bridge, Bombay.
- \*24. Central Ice & Cold Storage Co., Crawford Market, Saboo Siddick Road, Off Palton Road, Bombay.

- †25. Lalbaug Ice & Cold Storage, 41/D, Supari Baug Road, Parel, Bombay 12.  
 †26. Ahmed A. Fazelbhoy Ltd., Liberty Building, 42, Marine Lines, Bombay 1.  
 \*27. Superintending Engineer, Deep-Sea Fishing Station, Botawalla Chambers, Sir P.M. Road, Bombay.  
 28. The Milk Commissioner, Government of Bombay, Wakefield House, Ballard Estate, Bombay.  
 †29. The Textile Commissioner, Government of India, Ballard Estate, Bombay.

#### DEALERS IN INDIGENOUS PRODUCT

- \*1. P. B. Hilloowalla & Co., Station Road, Surat.  
 \*2. Himatlal & Co., Maharani Road, Siyaganj, Indore City.  
 \*3. Oriental Mercantile Agency, 99A, Armenian Street, Madras 1.  
 \*4. Gannon Dunkerley & Co. Ltd., Railwaypura Post, Ahmedabad 2.



## APPENDIX II

[Vide paragraph 4·3.]

*List of persons who attended the inquiry into the calcium chloride industry held on 14th October, 1954*

### PRODUCERS

1. Shri B. S. Lalkaka . . . . .	}	Representing	Pioneer Magnesia Works, Ltd., Kharaghoda.
2. Dr. M. M. Chudgar . . . . .			
3. Shri P. R. Pavri . . . . .			
4. Shri F. R. Moos . . . . .			
5. Shri Gianchand Jain . . . . .	}	,,	Dhrangadhra Chemical Works, Ltd., Dhrangadhra.
6. Shri C. M. Gandhi . . . . .			
7. Shri S. M. Dutta . . . . .			

### PRODUCERS' ASSOCIATIONS

1. Shri D. M. Trivedi . . . . .	Representing	Indian Chemical Manufacturers' Association, Bombay.
2. Shri Prabhu V. Mehta . . . . .	,,	The All India Manufacturers' Organisation, Bombay.

### CONSUMERS

1. Shri F. A. Irani . . . . .	Representing	National Ice & Cold Storage, Bombay.
2. Shri K. V. Joshi . . . . .	,,	Light-foot Ice & Cold Storage, Bombay.
3. Shri B. F. Mehta . . . . .	,,	City Ice Supply & Cold Storage, Bombay.
4. Shri G. R. Hathiram . . . . .	,,	Polson Ltd., Bombay.

### GOVERNMENT DEPARTMENTS

1. Shri C. P. Rao . . . . .	Representing	Textile Commissioner, Govern- ment of India, Bombay.
2. Shri H. K. Narayan . . . . .	,,	Deep-Sea Fishing Station, Bom- bay.

### APPENDIX III

[Vide paragraph 13]

Statement showing estimates of c. i. f. prices of foreign calcium

Source of information	Type and Specification	[Price, per ton].			
		As.	Rs.	As.	Estimated c.i.f. Price
1. Imperial Chemical Industries (India) Ltd., Calcutta	U. K. Origin.— (a) 600 lbs. drum packing (b) 1 cwt. drum packing	..	..	..	..
2. The High Commission of India, London	Belgium Origin.— (a) Flake 76/80% in drums of (b) Solid fused 72/75% in drums of about 441 lbs.	..	..	..	..
	Western German Origin.— (a) Flake 5/10 ton lots including about 441 lbs. (b) Solid fused 5/10 ton lots; drums of about 771.75 lb	253 15 6 b. Amsterdam/Rotterdam.	71 14 11	103 2 9 b. Amsterdam/Rotterdam.	71 6