

UNITED STATES TARIFF COMMISSION

DRAWN OR BLOWN FLAT GLASS
(SHEET GLASS)

Report to the President on Investigation No. TEA-IA-4 Under
Section 351(d)(2) of the Trade Expansion Act of 1962



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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that would result in the disclosure of the operations of individual concerns. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

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REPORT TO THE PRESIDENT

U.S. Tariff Commission
June 11, 1965

To the President:

This report is made pursuant to section 351(d)(2) of the Trade Expansion Act of 1962 (76 Stat. 900), ^{1/} which provides that--

Upon request of the President or upon its own motion, the Tariff Commission shall advise the President of its judgment as to the probable economic effect on the industry concerned of the reduction or termination of the increase in, or imposition of, any duty or other import restriction pursuant to this section or section 7 of the Trade Agreements Extension Act of 1951.

Introduction

Following an escape-clause investigation by the Tariff Commission under section 7 of the Trade Agreements Extension Act of 1951, as amended, ^{2/} the President proclaimed increased rates of duty on sheet glass. ^{3/4/} Initially, the increased duties were to become effective after the close of business on April 18, 1962; the President, however,

^{1/} This report is also submitted as the Commission's annual report on sheet glass for the purpose of sec. 351(d)(1) of the act.

^{2/} U.S. Tariff Commission, Cylinder, Crown, and Sheet Glass: Report to the President on Escape-Clause Investigation No. 7-101. . ., T.C. Publication 17, 1961 (processed) and U.S. Tariff Commission, Cylinder, Crown and Sheet Glass: Report in Response to the President's Request for Information Supplemental to the Report on Escape-Clause Investigation No. 7-101. . ., T.C. Publication 48, 1962 (processed).

^{3/} The term "sheet glass" is used in this report to identify the imported glass covered by the Commission's investigation. Such glass is currently identified as "drawn or blown flat glass" in the Tariff Schedules of the United States (TSUS), which became effective on Aug. 31, 1963; it was previously identified as "cylinder, crown, and sheet glass" by title I of the Tariff Act of 1930.

^{4/} Proclamation No. 3455 of March 19, 1962; 3 CFR, 1962 Supp., p. 35.

deferred the effective date of the increased duties until the close of business on June 17, 1962. ^{1/}

Since June 1962, when the duties were increased, the Commission has maintained a continuing review of developments with respect to sheet glass. In connection with this review the Commission has made one annual report to the President pursuant to section 351(d)(1) of the Trade Expansion Act of 1962. ^{2/}

On March 30, 1964, the President requested the Tariff Commission to advise him of its judgment as to the probable economic effect of the reduction or termination of the increases in duties on sheet glass. On the same date the Commission instituted its investigation to prepare such advice. A hearing in connection with the investigation was held on June 30 and July 1, 1964, at which all interested parties were given opportunity to be present, to produce evidence, and to be heard. The Commission also obtained information used in this report from its files, from other agencies of the U.S. Government, from correspondence, from field conferences with U.S. producers and representatives of foreign producers, and from responses to questionnaires sent to U.S. producers.

^{1/} Proclamation No. 3458 of March 27, 1962; 3 CFR, 1962 Supp., p. 40.

^{2/} Cylinder, Crown, and Sheet Glass: Report to the President (No. TEA-IR-7-63) Under Section 351(d)(1) of the Trade Expansion Act of 1962, T.C. Publication 110, 1963 (processed).

Probable Economic Effect of Reduction
or Termination of Increases in Duty
on Sheet Glass

The factors which affect the sheet glass industry, the subject of this investigation, are, to a large extent, the same as those associated with the generic product, flat glass. Sheet glass is one of two major flat glass classifications; the other is plate glass. Float glass, a new product of minor but growing importance, is still undergoing technological and marketing development. Neither float nor plate glass is officially under investigation.

The demand for all flat glass is in major part a derived demand: some 70 percent of the total is typically derived from building construction and automobile manufacture. The remainder is used for replacement, mirrors, and numerous miscellaneous products.

In both automobiles and buildings the cost of glass is so small a part of the total costs (and changes in the price of glass are so insignificant compared with total costs) that consumption is determined by activities in the primary industries and is not highly responsive to changes in price.

In the short run, therefore, the pricing of glass depends more upon market conditions and marketing strategy than upon cost or cost variations. Furthermore, the strategy is determined by a relatively small number of domestic producers and importers or foreign producers.

Plate and float glass (which account for somewhat more than half of the value but less than half of the quantity of the consumption of flat glass) are largely responsive to the demand for automobiles, in which about half of the total consumption of such glass is used. Sheet glass (which conversely accounts for less than half of the value but more than half of the quantity of the consumption of flat glass is largely responsive to building construction, which uses about two-thirds of the total consumption of such glass.

In 1964 seven firms, operating 14 plants, accounted for virtually all the production of sheet glass in the United States; they employed, on the average, 7,300 workers in the manufacture of sheet glass; and their aggregate sales of the product were valued at more than \$100 million. Of the 14 plants, 4 were located in West Virginia, 2 each in Pennsylvania and Oklahoma, and 1 each in Ohio, Illinois, Indiana, Tennessee, Louisiana, and Arkansas. The 6 plants in Appalachia usually employ about half the total number of workers in the industry; 4 of these plants, as well as the 2 plants in Oklahoma, are located in areas of persistent unemployment; the 6 installations in such areas together employ about half of the industry's work force. The major domestic producers of flat glass produce both plate and sheet glass; three of them are licensed to produce float glass (two are now in production). Only three firms produce sheet glass exclusively. Most managements, therefore, are aware of and affected by the production and marketing conditions of flat glass in general, as well as of

sheet glass specifically, and have some influence over the types of glass to be produced and the competition among them. Sheet glass accounts for less than one-fifth of the total value of sales for each of the two dominant companies, which produce about two-thirds of such glass.

Glass production is not an in-and-out industry. It requires technical know-how, large capital, extensive marketing capacity, and continuous operation of furnaces. The larger companies are better able than the smaller ones to adjust production to demand, especially by balancing drawing operations to the larger number of furnaces. Even so, producers' inventories of sheet glass at the end of 1964 were at a high level--11 percent of annual sales as against 4 percent in 1955.

In the past decade and a half the major characteristic of the apparent consumption of sheet glass has been wide fluctuations caused not only by changes in demand of the consuming industries but also by recurring labor difficulties. The peak consumption in 1959, for example, was in part the result of pent-up demand following a work stoppage in the domestic industry which caused consumption in 1958 to reach a record low for recent years. The slow and erratic upward movement of apparent consumption of sheet glass as a whole has been a composite of a downward movement in apparent consumption of window glass and a somewhat stronger upward movement in apparent consumption of heavy sheet glass. Apparent consumption in 1962-64 was high and

it demonstrated an upward movement but, even so, the 1964 figure did not surpass the 1959 peak.

It is also significant that domestic shipments of sheet glass do not reflect even the gradual increase of total consumption. As a matter of fact, there has been no discernible trend.

With the demand situation since 1962 leading to a strengthening of prices, the increase in duty was taken as an opportunity to raise prices. Both domestic and foreign prices were increased. The traditional price differential favorable to imports (at or near port cities) was generally maintained although it was reduced somewhat. ^{1/} The higher prices increased profits of domestic producers as volume rose. Imports, although down in 1963, were higher in 1962 and 1964 than in any preceding year except 1959; ^{2/} in 1962 and 1964 they roughly maintained the percentage of the market that they had achieved prior to the increase in duties. Even though the duty was increased more on heavy sheet glass than on window glass, the ratio of imports to apparent consumption continued to be greater for the former than for window glass.

The productive capacity of the domestic sheet glass industry has increased in all but 2 years since 1955. Yet, percentage of use has

^{1/} This is the general situation but, as pointed out in the body of this report, there were variations by type of product. For instance, the duty on certain heavy sheet glass was raised far more than that on other types, and the price differential became less favorable to imports. Even so, imports of such glass increased both absolutely and as a percentage of the market.

^{2/} Imports in 1962 were artificially high as a result of anticipated duty increases; they were unusually low in 1963 because of the high level of importers' inventories, which had been built up before the duty increase.

been lower in recent years than it was in 1955-56. Investment in plant has increased, output per man-hour has gone up, and total man-hours have decreased. The overall figures, however, obscure varying levels of activity within the industry. In 1964 some plants and furnaces operated even above normal expected capacity, while others--especially those of smaller companies and some of the older ones located principally in depressed areas--were either shut down or operating at low rates.

Although competition from imported sheet glass has typically been greatest near the coast, changed pricing practices implemented by the foreign manufacturers after the duties were increased have tended to concentrate competition in and near port cities to an even greater extent.

Even with a high level of general prosperity--which tends to bolster the demand for glass in building construction and for replacement (and in automobiles, which are a less important market for sheet than for plate glass)--the Commission does not foresee large and sustained increases in the demand for sheet glass or in domestic shipments. No doubt the demand will continue to be subjected to continued wide fluctuations. Meanwhile, technological developments affecting relative costs, quality, and prices of sheet, plate, and float glass, seem to deter the expansion of the market for sheet glass that might be expected from a growing economy.

Statement of Commissioners Dorfman, Fenn, and Culliton

Restoration of the concession rates of duty would probably have only a slight effect on the domestic sheet glass industry in the present and the immediately foreseeable future, aside from some slight impact of the kind which can usually be expected from tariff reductions, such as: Some increased pressure on older plants and smaller companies; somewhat softer prices and pressure against higher prices; a tendency for imports to increase because of some additional price advantage in marginal markets and additional marketing flexibility for the importers both geographically and in terms of added sales effort; some lessening of confidence of the domestic industry; and a tendency, by making competition more severe, to concentrate domestic production in the stronger and more modern establishments where output per man-hour may be expected to rise. Unless there is a change from the past pattern of wide fluctuations in domestic shipments, these general tendencies may be expected to ease during times of rising demand and to strengthen considerably in periods of downswing. In this connection we note the recent reduction in the prices of imported sheet glass.

The task of predicting the probable economic effect of a restoration of the concessions on this industry is complicated by the consideration that the increased duties have been imposed only recently (1962). Furthermore, the first full year of their operation (1963) was distorted by a number of extraneous factors. This difficulty is

meaningful for the managers in the industry, just as it is for the Government, because they have to make their business decisions in view of the brevity of the period of added protection and the scheduled expiration date (1967) for the duty increases. They would probably interpret a decrease now as indicating a less favorable set of conditions thrust upon them earlier than they had expected and definitely earlier than they had hoped (presumably they will make every effort to have the duty increases extended beyond 1967).

Statement of Commissioners Talbot and Sutton

The following factors are important when considering the probable economic effects on the sheet glass industry of a duty reduction:

1. All signs indicate that this is not going to be an industry with great growth and will probably be a static or declining one.
2. Consumption is highly dependent on demand derived from the building-construction and automobile industries, with the result that consumption is subject to the sharp cyclical fluctuations which have characterized those industries.
3. Sheet glass supplied by the principal foreign producers is generally recognized as being comparable in quality to domestically produced sheet glass. The focal point of competition in the sheet glass industry is price, and one of the key determinants of the price of foreign sheet glass is the duty. A termination of the increases in duties would result in duty reductions equivalent to 4-20 percent of the present duty-paid prices of most imported sheet glass.
4. Even after the duties were increased, imports retained approximately the same share of the market that they

had before the "escape action." This demonstrates the ability of the foreign manufacturers to compete in the U.S. market notwithstanding duties the ad valorem equivalents of which ranged from 18 to 54 percent of the foreign value in 1964.

5. Six plants accounting for more than half the U.S. production of sheet glass and a like share of employment in the sheet glass industry are in the heart of Appalachia. Two other plants are located in areas of substantial and persistent unemployment.
6. The U.S. producers' inventories of sheet glass were at an all-time high at the close of 1964 (table 6).
7. There have been several indications of a softening of prices of sheet glass, particularly those of imported glass, during the past several months:
 - (a) Late in 1964 the U.S. producers increased their terms-of-payment discount from 1 percent to 2 percent; early in 1965 the foreign manufacturers responded by increasing their maximum terms-of-payment discount from 3 percent to 5 percent.
 - (b) Certain foreign manufacturers and at least 1 domestic manufacturer increased discounts on sheet glass shipped in extra-large containers.
 - (c) Some foreign manufacturers announced (in May 1965) a reduction in their prices for 18-ounce and 24-ounce glass
* * *
8. Shipments by U.S. producers in 1963 and 1964 were lower than those in any of the years 1955, 1956, and 1959.

Given the foregoing one could expect that a reduction in duty would--

1. Exert a downward pressure on sheet glass prices;

2. Lead to an increase in the share of consumption supplied by imports;
3. Contribute toward a decline in employment and profits;
and
4. Idle productive facilities.

Furthermore, one could expect that the actual repercussions would go beyond those which a narrowly focused price analysis would indicate. A less favorable price position of domestic versus foreign sheet glass reduces the opportunities of domestic producers to make the most of strong demand situations and to provide a defense against weak demand situations.

Information Obtained in the Investigation

Description and uses

The imported product covered by this report is sheet glass weighing over 4 ounces per square foot. Such glass is currently identified in the TSUS as "drawn or blown flat glass." It was identified under the Tariff Act of 1930 as "cylinder, crown, and sheet glass." ^{1/}

Sheet glass is one of the four principal types of flat glass. The other three types, imports of which are not covered by the present investigation, are described briefly below:

Rolled glass is a translucent type of flat glass (sometimes containing a wire netting) which has irregularities impressed on its surfaces by the rollers used to form the glass. It is generally used in applications where transparency is unnecessary or objectionable, but where light is needed, as in skylights, factory windows, and office partitions.

Plate glass is rolled glass which has been ground and polished. The grinding and polishing make the glass transparent and render its surfaces virtually plane and parallel, thereby eliminating the distortion which is found, in various degrees, in sheet glass. Because of the virtual absence of distortion and the expense involved in grinding and polishing the glass, plate glass commands a considerably higher price than sheet glass. It is used chiefly in automobile windshields; it is also used in auto sidelights and in glazing large openings such as those in store display windows and curtain wall construction.

Float glass ^{2/} is a relatively new type of transparent flat glass with virtually plane and parallel

^{1/} Cylinder and crown glass are made by hand production methods, which are now virtually obsolete.

^{2/} The technique of manufacturing float glass was developed by a British firm--Pilkington Bros., Ltd.

surfaces comparable to those of plate glass. The parallel surfaces of float glass, however, are achieved by floating a layer of molten glass over molten metal rather than by physical grinding and polishing. ^{1/} Float glass has thus far been used primarily in auto side windows, but it is also being used in auto windshields, in mirrors, and for general glazing purposes.

Sheet glass is a transparent flat-glass product made by machine drawing, and having a smooth fire-polished surface. New building construction accounts for about 65 percent of the total U.S. consumption of sheet glass, and automobile production accounts for about 15 percent; the other 20 percent is accounted for by replacement glazing and by the manufacture of mirrors and other products.

Within the sheet-glass-product classification there are three major subclassifications, based on the thickness of the glass. The respective products and their uses (generally different) are as follows:

- (1) Thin sheet glass (sheet glass weighing not over 16 ounces per square foot) is used in miscellaneous applications such as microscope-slide glass, photographic dry plates, picture glass, and small mirrors.
- (2) Window glass (sheet glass weighing over 16 ounces but not over 28 ounces per square foot) ^{2/} is used chiefly for glazing windows, doors, and storm sash in residential construction. It is also used in making laminated glass (safety glass consisting of sheets of glass with a plastic interlayer), pinball machine covers, and double-glazed insulating units.

^{1/} Float glass was first produced in commercial quantities in 1959 and was first imported into the United States in 1960. Two U.S. float-glass-production facilities began operation in 1964; two such facilities are now under construction, and plans have been announced for the construction of two others.

^{2/} Window glass is frequently further divided into two subclassifications: Single-strength glass (weighing 18 or 19 ounces per square foot) and double-strength glass (weighing 24 or 26 ounces) per square foot.

- (3) Heavy sheet glass (sheet glass weighing over 28 ounces per square foot) is used to glaze large openings such as glass patio doors and the fixed glass panels frequently found adjacent to them. Heavy sheet glass is often tempered (specially toughened) and, in that form, used extensively in the side and rear windows of many automobiles.

U.S. tariff treatment

In June 1962 the President increased the rates of duty on sheet glass dutiable under paragraph 219 of the Tariff Act of 1930, except such glass weighing not over 4 ounces per square foot. ^{1/} The trade-agreement rates of duty in effect immediately preceding the effective date of the President's proclamation, as well as the escape-action ^{2/} rates that came into effect under that proclamation, are shown below (in cents per pound):

Sheet glass weighing over 4 ounces per square foot and measuring in square inches---	<u>Duties immediately preceding escape action</u>	<u>Increased duties resulting from escape action</u>
Not over 384-----	0.7	1.3
Over 384 and not over 864---	.9	1.6
Over 864 and not over 2400-	1.1	1.9
Over 2400:		
Weighing not over 28 ounces per square foot-	1.4	2.4
Weighing over 28 ounces per square foot-----	1.4	3.5

^{1/} Sheet glass weighing not over 4 ounces per square foot is commonly known as ribbon glass. Such glass accounts for only an insignificant portion of total imports, production, and consumption of sheet glass. No data on ribbon glass are included in this report.

^{3/} The term "escape action" as used in this report is the action taken by the President to increase the rates of duty on sheet glass pursuant to the escape-clause procedure.

On August 31, 1963, the Tariff Schedules of the United States (TSUS) replaced titles I and II in the Tariff Act of 1930. The classifications for sheet glass in the TSUS differ in form from those formerly in effect. ^{1/}

The average ad valorem equivalents of the increased specific rates of duty--based on imports subject thereto in 1963--ranged from 18 percent to 57 percent (table 2). Almost one-fifth of the 1963 imports entered at rates of duty equivalent to less than 20 percent ad valorem; about three-fifths, at rates equivalent to about 30 percent ad valorem; and more than one-fifth, at rates equivalent to more than 55 percent ad valorem.

On most sizes of sheet glass, the average ad valorem equivalents of the increased rates of duty were nearly double those of the trade-agreement rates based on similar imports in 1961. The average ad valorem equivalent of the increased rate of duty on glass measuring over 2,400 square inches and weighing over 28 ounces per square foot, however, was more than three times that of the trade-agreement rate. This marked increase is attributable largely to the increase in the

^{1/} Tariff treatment for sheet glass subject to the escape-action rates of duty was formerly provided for under par. 219 of the Tariff Act of 1930 (with an additional duty if colored or processed imposed under par. 224); it is currently provided for under items 542.11 to 542.98 and item 544.17 of the TSUS. The escape-action rates of duty are provided for in items 923.11 to 924.00 of the TSUS appendix. Certain size brackets were modified slightly under the TSUS to bring the tariff provisions into closer conformity with trade practices; however, only an insignificant quantity of sheet glass was subject to altered rates of duty. The tariff classifications in the TSUS pertaining to the sheet glass subject to the escape action and the pertinent rates of duty which became effective Aug. 31, 1963, are shown in table 1.

specific rate of duty (since the escape-action rate was 2-1/2 times the trade-agreement rate). To a lesser extent, it resulted from a decline in the average unit value of the glass. The average ad valorem equivalents declined slightly in 1964 owing to the increase in foreign unit value resulting from price increases which occurred during the summer of 1963 and early in 1964.

Before the increased rates of duty were imposed in June 1962, all glass dutiable under paragraph 219 that was the product of Communist countries ^{1/} was dutiable at the full rates in the Tariff Act of 1930, as amended. After the imposition of the escape-action rates, all such glass from Communist countries continued to be dutiable at the full rates except glass measuring over 2,400 square inches and weighing over 28 ounces per square foot. Since the escape-action rate for this glass is higher than the previously applicable full rate, the escape-action rate applies to imports from Communist countries as well as to imports dutiable at most-favored-nation (MFN) rates.

U.S. consumption

In 1955-64 the apparent U.S. consumption of sheet glass moved irregularly upward. The consumption of sheet glass increased at a slower rate than either gross national product or the Federal Reserve index of industrial production. This lag is largely attributable to

^{1/} The term "Communist countries" as used in this report refers to those countries designated as Communist dominated or controlled pursuant to secs. 231 and 257(e) of the Trade Expansion Act of 1962.

the sluggishness in building construction, the principal consuming industry, in the United States (table 3).

The apparent consumption of sheet glass in each of the years 1962 through 1964--1.9 to 2.0 billion pounds--was appreciably higher than in either 1960 or 1961 and was exceeded only by that in the peak year, 1959 (table 4). The substantial increase in the consumption of sheet glass in 1962 reflected the concurrent large increases in residential construction and automobile production, whereas the more modest advances in such consumption in 1963 and 1964 reflected a slowdown in the rate of expansion in those consuming industries (particularly in 1964).

Thin sheet glass.--The annual consumption of thin sheet glass has increased almost steadily since 1955, but such consumption still accounts for only a small part (less than 4 percent) of the total consumption of sheet glass.

Window glass.--The apparent annual consumption of window glass amounted to 1.1 to 1.2 billion pounds during the 1960-64 period. Window glass has accounted for about three-fifths of the total quantity of sheet glass entering consumption in recent years, although its share declined from 66 percent in 1960 to 58 percent in 1964. Before 1962, changes in the apparent annual consumption of window glass were usually closely related to changes in the level of home construction and automobile production. After reaching a peak of 1.5 billion pounds in 1959,

the consumption of window glass declined with the slackened pace of those industries in 1960 and 1961. Although activity in those industries was substantially greater during 1962-64 than in the immediately preceding years, the consumption of window glass remained stable. Two factors appear to have accounted for this stability: (1) Tempered glass (made from a single piece of heavy sheet glass) has largely replaced laminated glass (made from two pieces of window glass) for use in the side windows of automobiles, and (2) larger openings, which require the use of heavier glass (e.g., sliding glass doors and picture windows), have been used increasingly in both residential and commercial buildings.

Heavy sheet glass.---The apparent consumption of heavy sheet glass has increased in almost every year since 1955. Such consumption during 1963 and 1964--0.8 billion pounds annually--was appreciably greater than the annual average during the period 1955-64. The increase in annual consumption is attributable not only to the displacement of window glass by heavy sheet glass, as cited above, but also to the economic growth of the consuming industries. In 1964, heavy sheet glass constituted 38 percent (by weight) of total U.S. consumption of sheet glass.

U.S. producers

Virtually all of the U.S. production of sheet glass is accounted for by 7 firms in 14 establishments. ^{1/} Sheet glass accounts for all of the output of 11 of these establishments and nearly all of the output of 2 of them, but only a small part of the output of 1 of them. Of the 7 firms discussed above, 4 firms conduct multiproduct operations (preponderantly in establishments other than those producing sheet glass), and the other 3 firms produce only sheet glass; ^{2/} 3 of the 7 firms accounted for more than 85 percent (based on weight) of the U.S. producers' shipments of sheet glass in 1964.

Of the 14 establishments producing sheet glass, 4 are located in West Virginia, 2 each in Pennsylvania and Oklahoma, and 1 each in Ohio, Illinois, Indiana, Tennessee, Louisiana, and Arkansas. ^{3/}

^{1/} The number of firms and the number of establishments shown above are each 3 less than the numbers indicated in previous reports. This difference results from two circumstances. First, insignificant quantities of special types of sheet glass are produced by 2 firms at 2 establishments. These firms and establishments are not included in the count above, but were included in earlier reports. Data on the sheet glass operations of these firms, however, are included in the appropriate sections of this report (i.e., production and shipments). Second, the rates of duty on sheet glass weighing less than 4 ounces per square foot were not modified by the escape action. Therefore, data with respect to such glass (and the firm and establishment which produce it) are not included in this report.

^{2/} One of these three firms recently began fabricating a small portion of the sheet glass which it produces.

^{3/} In April 1965, one producing firm announced plans for building a sheet glass plant in California.

U.S. production and shipments

Although production of sheet glass did not increase during the period 1955-64, the productive capacity of the industry has been increased in all but 2 years since 1955. Two new plants have begun production (one each in 1957 and 1959), and a new continuous furnace has been added (in 1961). Many factories have installed new drawing machines with greater capacity and have modernized other production facilities.

Data on the U.S. production of sheet glass, together with indexes of the U.S. producers' capacity to produce sheet glass and of the trend of the utilization of that capacity are shown for the years 1955-64 in the following tabulation (1957-59=100):

Year	Capacity index <u>1/</u>	Production index	Actual production <u>Million</u> <u>pounds</u>	Index of capacity utilization <u>2/</u>
1955-----	89	119	1,572	133
1956-----	93	125	1,661	134
1957-----	98	96	1,268	97
1958-----	98	82	1,084	83
1959-----	103	123	1,627	119
1960-----	105	97	1,288	93
1961-----	109	93	1,233	85
1962-----	110	113	1,503	103
1963-----	114	115	1,519	100
1964-----	114	117	1,554	103

1/ This index of theoretical capacity is based on the output that would have been achieved if all installed tanks and drawing machines available for use each year had been in operation continuously (24 hours per day) throughout the year.

2/ The ratio of production to theoretical capacity was 54 percent in 1957-59, or 100 for the purpose of this index.

Information available to the Commission on the extent of idle facilities relates to the number of idle continuous furnaces. The domestic producers of sheet glass indicated that 22 of their 33 continuous furnaces were in operation on May 20, 1965. The 22 furnaces accounted for approximately two-thirds of total capacity. It appears that most of the 11 furnaces which were not in operation were "down" primarily for lack of orders. ^{1/}

Variations in annual production of sheet glass have corresponded closely with changes in U.S. producers' annual shipments (including intracompany transfers); changes in the latter have closely reflected changes in annual consumption. Fluctuations in annual shipments have also reflected fluctuations in new building construction and automobile production (particularly the former). Shipments rose each year from 1960 (when they amounted to 1.3 billion pounds) through 1963 (when they amounted to 1.6 billion pounds), then declined slightly to 1.5 billion pounds in 1964. Shipments during 1963 and 1964 were almost as great as in the preceding peak years of 1955, 1956, and 1959 (table 4). Since 1957 the share of annual consumption supplied by

^{1/} It is often impossible to ascribe definitively the cause of furnace downtime (e.g., a labor dispute may coincide with a lack of orders or with an essential periodic rebuilding of a furnace).

domestic shipments has been relatively stable, ranging from 75 to 80 percent; it averaged 77 percent during that period. In 1963, the first full year after the duty was increased under the escape clause, domestic producers supplied 80 percent of apparent consumption; they supplied 76 percent in 1964.

Thin sheet glass.--Domestic shipments of thin sheet glass (glass weighing not over 16 ounces per square foot) supplied less than half of the annual consumption of such glass in each year of the last decade.

Window glass.--Domestic shipments supplied 75 percent or more of the annual consumption of window glass in each of the last 10 years (from col. 4, table 5). Before 1960, year-to-year changes in such shipments closely reflected fluctuations in activity of the major consuming industries (building construction and automobile production). U.S. producers' annual shipments of window glass during 1962-64 (when they averaged 911 million pounds) were greater than those during 1960-61. The increased shipments reflected primarily the substantially increased activity in building construction; the share of the U.S. market for window glass supplied by domestic producers in 1962-64 also increased over that in the earlier period.

Heavy sheet glass.--U.S. producers supplied 74 percent or more of annual consumption of heavy sheet glass in each of the last 10 years (col. 7, table 5). With the rising demand for such glass, shipments by domestic producers increased each year from 1959 to 1963; in 1964, however, they were somewhat smaller than in 1963.

U.S. producers' inventories

During 1955-64, yearend inventories of sheet glass held by the U.S. producers ranged from 4 to 12 percent of their annual shipments. Such inventories were at a record high of 164 million pounds at the end of 1964 (table 6).

U.S. imports

Sheet glass dutiable at MFN rates constitutes the preponderant part of the sheet glass imported into the United States. Although imports from Communist-dominated countries at full rates of duty have been small, they have increased substantially, though irregularly, in recent years. Most of the sheet glass dutiable at MFN rates is comparable in quality to U.S.-produced sheet glass. Most of that imported from Communist-dominated countries, on the other hand, is inferior in quality.

In 8 of the past 10 years, MFN imports varied with the apparent consumption of sheet glass. The following series of indexes indicate the moderate upward trend of apparent consumption and the more pronounced upward trend of imports at MFN rates in 1955-64:

<u>Year</u>	<u>MFN imports</u>	<u>Index (1957-59=100) of--</u>
		<u>Apparent consumption</u>
1955-----	72	111
1956-----	94	115
1957-----	64	89
1958-----	88	86
1959-----	148	126
1960-----	118	101
1961-----	106	99
1962-----	131	115
1963-----	114	118
1964-----	135	121

The volume of imports clearly responded to the peak level of building construction in 1959, its subsequent decline in 1960 and 1961, and its upturn in 1962. The higher imports in 1962 were also attributable in part to efforts by importers to enter as much glass as possible prior to the increase in the rates of duty. In 1963, however, MFN imports were 13 percent below those in 1962, notwithstanding the continued increase in the consumption of sheet glass. The decline was attributable to various factors, including the increase in the duties, the high level of inventories in the hands of importers at the end of 1962, the dock strike on the U.S. Atlantic and Gulf Coasts during January 1963, and, to some extent, the revised FHA standards, which became effective in April 1963. ^{1/} In 1964, MFN imports were 18 percent above those in 1963, reflecting the increased demand and, to some extent, threatened shortages of domestically produced glass attributable (in part) to the prolonged strike at the Fourco Glass Co.

Measurement of the extent to which trade-agreement concessions were responsible for the greatly increased imports of sheet glass during the middle and late 1950's is not possible. The major concessions became effective in 1948 and 1951, and the smaller, 3-stage concessions became effective in 1956-58. The greatest absolute

^{1/} Implementation of the revised FHA property standards requires that glass installed in FHA-financed homes meet designated standards of thickness for certain size lights of glass. These standards, if rigidly enforced, would preclude the use of the less expensive 18- and 24-ounce window glass, which has been available only from the foreign producers, in favor of the use of 19- and 26-ounce window glass, which is available from both domestic and foreign producers.

increases in MFN imports were from 1954 to 1955 and from 1958 to 1959; both 1955 and 1959 were characterized by high U.S. consumption and shortages of domestically produced glass. It appears that the increased MFN imports resulted from a combination of factors, including the periodic shortages of domestically produced glass, the desire by some purchasers of sheet glass to have both foreign and domestic sources of supply, and the price advantage of the imported glass. ^{1/}

The escape action has not had a substantial effect on the share of the market supplied by MFN imports. Although the share of consumption supplied by such imports in 1963 (19 percent) was somewhat lower than it was in the 4-year period 1959-62, when it ranged from 21 to 24 percent, the smaller share is attributable to several factors (cited earlier in this section) besides the increase in duties. The share of apparent U.S. consumption of sheet glass supplied by imports dutiable at MFN rates in 1964 (22 percent) was about the same as in the 1959-62 period.

The quantity of sheet glass imported from Communist countries (at full rates of duty) has increased in most of the years since 1954. Such imports reached a peak of 36 million pounds in 1962, declined sharply to 17 million pounds in 1963, and then increased to 32 million pounds in 1964 (table 4). The smaller volume of imports in 1963 is attributable to a variety of causes, including the excessive inventories held by the principal importer of such glass, the termination

^{1/} For a more detailed discussion of factors affecting the trend of imports, see the Tariff Commission escape-clause report on sheet glass (cited in footnote 2, p. 1), pp. 27-29.

of the exclusive contract formerly held by that importer for the importation of glass from the U.S.S.R., and the dumping investigations--instituted by the U.S. Treasury Department in 1963--concerning window glass from Czechoslovakia and the U.S.S.R. ^{1/}

Imports by kinds.--Imports at MFN rates supplied the major share of thin sheet glass consumed each year in the past decade. Imports of such glass, which were successively higher in most of the last 10 years, reached a peak of 52 million pounds in 1964 (table 5).

Imports of window glass at MFN rates were successively lower in each of the years 1960-63, notwithstanding the slightly larger consumption of such glass in 1962 and 1963 than in 1960 and 1961. Such imports were somewhat higher in 1964 than in 1963.

Imports of heavy sheet glass were the highest on record in 1964, when they amounted to 166 million pounds (table 7). Imports of the larger sizes of heavy sheet glass (over 15 square feet in area) in 1962 and 1963 were much greater than in the previous peak year, 1959. The larger sizes of heavy sheet glass, moreover, were subject to by far the highest escape-action duty (equivalent, on the average, to 57 percent ad valorem in 1963). The substantial increase in imports of the large sizes of heavy sheet glass notwithstanding the greatly increased duty on such glass is attributable primarily to the greatly

^{1/} The Treasury Department determined that window glass from both the U.S.S.R. and Czechoslovakia was being sold in the United States at "less than fair value." The Tariff Commission reported its determinations on Sept. 29, 1964, and Nov. 16, 1964, with regard to imports of window glass from the U.S.S.R. and Czechoslovakia, respectively, "That an industry in the United States is not being, and is not likely to be, injured, or prevented from being established, by reason of the importation of window glass...sold at less than fair value..."

increased demand for such glass, which arose from the expanded use of heavy sheet glass in patio doors and picture windows.

The ratio of window glass to heavy sheet glass is roughly the same for imports at full rates of duty as for imports at MFN rates.

Annual imports of colored and specially processed sheet glass have remained small during the last several years (table 5).

Imports by sources.--In 1964, sheet glass was imported at MFN rates from 27 countries. West European countries and Japan were the sources of most imports, but other countries (e.g., Israel, Taiwan, and South Korea) have supplied substantial quantities in recent years. Belgium, the principal supplier, accounted for 35 percent of the sheet glass imported during the period 1955-64 and 31 percent of that imported in 1964 (table 8). Japan has become an increasingly important supplier; the share of the total imports coming from that country increased from an average of 12 percent during 1955-62 to 17 percent during 1963-64. Other important sources include West Germany, the United Kingdom, and France. The U.S.S.R. and Czechoslovakia have been the chief suppliers of the small amounts of sheet glass imported at full rates of duty.

Prices

Prices of domestic glass.--The "net prices" paid by concerns purchasing domestic sheet glass directly from the producers--i.e., the delivered cost of the glass to those concerns--were materially

greater in 1964 than in 1959. ^{1/} "Net prices" had been reduced sharply early in 1960 (through a change in pricing practices), but were increased several times thereafter.

Early in 1960, without changing their list prices or discounts, the producers shifted from quoting prices on a freight-equalized basis to a delivered-price basis, ^{2/} thereby reducing the delivered cost of domestic sheet glass to users at virtually all destinations. The change to a delivered-price basis reduced the U.S. producers' average net realization on sales by about 7 percent (and thus, on the average, reduced "net prices" by that percentage). The savings to direct-factory buyers located in or near seaboard cities were generally greater than for buyers located elsewhere. ^{3/}

In the summer of 1960, U.S. producers increased their delivered prices by about 5 percent; they increased them by another 5 percent in the spring of 1962, and by 5 to 9 percent (depending on the type of packing) in the summer of 1963 (table 10). Through 1963 the prices of domestic sheet glass in all important thicknesses ^{4/} were increased about proportionately. Early in 1964, however, the prices of single-strength glass were increased by 5 percent, while the prices of

^{1/} Prices in effect in 1959 were virtually identical with those in effect in 1957 and 1958.

^{2/} Under the freight-equalization system, producers paid freight in excess of that from the domestic supplier nearest the purchaser. Under the delivered-price system, all freight from the producer to the purchaser is absorbed by the producer. For further information, see the Commission's escape-clause report on sheet glass (cited in footnote 2, p. 1) and the Commission's report of Sept. 27, 1963, under sec. 351(d)(1) with respect to sheet glass (cited in footnote 2, p. 2).

^{3/} Seaboard buyers are generally located farther from domestic plants than are inland buyers.

^{4/} E.g., single-strength, double-strength, and heavy.

double-strength and heavy-sheet glass were not changed. Late in 1964 one of the major domestic producers increased its prices only on heavy sheet glass in sizes over 25 square feet. Early in 1965 other domestic producers followed suit.

Notwithstanding the price increases noted above, because of the effect of the change to a delivered-price basis, the "net prices" of sheet glass to buyers in most major inland cities did not exceed their 1959 peak until the spring of 1962, and those to buyers in seaboard cities did not exceed their 1959 peak until the summer of 1963. Price data on sheet glass published by the U.S. Bureau of Labor Statistics (BLS) indicate that average prices prevailing late in 1963 were about 11 percent higher than those prevailing late in 1959 (i.e., before the change in the method of pricing) (table 10).^{1/} After the 5-percent price increase early in 1964 on single-strength glass, the average prices of sheet glass of that thickness were about 16 percent higher than those in 1959. For most categories of domestic sheet glass, net prices on May 1, 1965, were little different than on May 1, 1964 (see footnote 2, table 11).

Prices of imported glass.--Since the President proclaimed the increased rates of duty, foreign manufacturers (in addition to reverting to ex-dock prices) have increased their prices on certain categories of sheet glass^{2/} on three occasions and their prices on all other

^{1/} The Bureau of Labor Statistics national price indexes do not coincide with the Tariff Commission's indexes for selected cities because the BLS data reflect the composite price effect of the shift from freight-equalized prices to delivered prices, as reported by the domestic producers, whereas the Commission's indexes reflect the averages based on shipments by the U.S. producers to selected U.S. cities. If May 1, 1960, had been used as a base, the two series of index numbers would have been virtually identical on all subsequent dates.

^{2/} Single-strength window glass and heavy sheet glass measuring over 25 square feet in area.

sheet glass on two occasions. ^{1/} In May 1965, however, several foreign manufacturers announced a small reduction in the price of certain thicknesses of sheet glass. * * * Changes in the prices of West European sheet glass to purchasers in the more important U.S. port cities have been about proportional to changes in the delivered prices of U.S.-produced sheet glass in such cities (table 11). The delivered prices of Japanese sheet glass have increased to a greater extent than delivered prices of West European sheet glass; the U.S. prices of Japanese glass are now generally about equal to those of West European glass.

Comparisons of prices of domestic and West European glass.--The delivered prices of two representative categories of domestically produced and imported sheet glass in New York City are shown in table 11. The price comparisons shown are typical of those in most coastal cities (where the competition between domestic and imported glass is most intense). The price differential diminishes as the distance inland from port cities increases. In most inland locations the delivered price of domestic glass is lower than that of imported glass.

^{1/} In 1962, after the President proclaimed the increased rates of duty, foreign manufacturers changed their method of quoting prices from a delivered to an ex-dock (duty-paid) basis. For most glass, the combined cost of customs brokerage, loading, and trucking is equivalent to roughly 5 percent of the total delivered cost in seaboard cities.

For single-strength glass (the most important thickness of window glass), the duty-paid delivered cost of the West European glass was almost 8 percent lower than the delivered price of the domestic glass for about 2 years prior to the escape action. Since the escape action, the price differential, in favor of West European single-strength glass at New York City has generally been between 5 and 7 percent (table 11).

For heavy sheet glass, the delivered price of the West European glass was about 9 percent lower than the delivered price of the domestic glass for about 2 years prior to the escape action. Since the escape action, the price differential has generally been between 4 and 6 percent.

Employment in U.S. establishments

Changes since 1955 in the average annual employment in the U.S. establishments producing sheet glass have reflected changes in the annual production of sheet glass except in 1963 and 1964. Employment in the production of sheet glass declined from 16.4 million man-hours in 1959 to a low of 12.8 million man-hours in 1961 (table 9). It rose substantially with the upturn in production to 15.0 million man-hours in 1962, but declined to 14.5 and 14.3 million man-hours in 1963 and 1964, respectively, although production increased slightly in each of those years. The average number of production and related workers employed in making sheet glass during 1955-64 ranged from 8,461 in

1956 to 6,420 in 1961. Indexes of the U.S. production of sheet glass, of man-hours worked in the production of sheet glass, ^{1/} and of output per man-hour, for the years 1955-64 are shown in the following tabulation (1957-59=100):

<u>Year</u>	<u>Production</u>	<u>Man-hours</u>	<u>Output per man-hour</u>
1955-----	119	116	103
1956-----	125	121	104
1957-----	96	97	99
1958-----	82	86	95
1959-----	123	117	106
1960-----	97	97	101
1961-----	93	92	102
1962-----	113	107	106
1963-----	115	104	111
1964-----	117	102	115

The decline in employment (in terms of man-hours) after 1962, accompanied by an increase in production, reflects a significant increase in output per man-hour, which is attributable to improvements in technology coincident with the highest levels of production since 1959.

Products other than sheet glass are produced in 3 of the 14 establishments currently producing sheet glass. In 2 of the 3 establishments only a small number of workers produce other products; in the other establishment the number of workers producing other products accounted for the preponderant share of the total employment in the

^{1/} Percentage changes in the average number of production and related workers engaged in the production of sheet glass were virtually identical with changes in man-hours.

establishment. Employment in the production of other products (including processed sheet glass) in terms of both the average number of workers and the man-hours worked has increased significantly since 1957. The proportion of total man-hours worked in the 14 establishments that was accounted for by the production of the other products increased from 3 percent in 1955 to 22 percent in each of the years 1962-64. The greater share of production consisting of other products in recent years is attributable primarily to the beginning of operation (in 1957) of a large establishment in which both sheet and plate glass are produced and further processed and to the initiation of tempering operations at two other establishments.

Profit-and-loss experience of domestic producers

Profit-and-loss data were received from six firms, ^{1/} which produce sheet glass in 13 establishments (table 12). ^{2/} These six firms accounted for more than nine-tenths of the domestic production of sheet glass in each of the years 1955-64.

The aggregate net sales (including intracompany transfers)*.*.* of sheet glass by the six firms increased in value from *.*.*

^{1/} The only firm producing substantial quantities of sheet glass which did not submit profit-and-loss data was the Ford Motor Co. Ford's production is predominantly captive.

^{2/} In 1961 and 1962 each of the 13 establishments produced only unprocessed sheet glass. In 1963, 11 of the establishments produced only unprocessed sheet glass, and 2 establishments produced small quantities of tempered sheet glass also.

* * * * *

\$107.4 million in 1961 to \$122.0 million in 1962, and to \$130.9 million in 1963. Such sales reached new peaks in each of the years 1963 and 1964.

The six firms reported a small aggregate net loss on their sheet glass operations in 1960, small aggregate net profits in 1961 and 1962, and substantially improved aggregate net profits in 1963. Profit-and-loss data submitted by the four firms for which 1964 data are available indicate a further improvement in aggregate net profits in that year. ^{1/} It should be noted, however, that the two firms for which 1964 data are not available were closed by a strike for almost 6 months. * * * It appears that the four reporting firms benefited to some extent from the suspended operations of the nonreporting firms.

The six firms reported a net loss * * * in 1960; they had net profits of \$1.3 million (equal to 1.3 percent of sales) in 1961, \$3.3 million (equal to 2.7 percent of sales) in 1962, and \$12.4 million (equal to 9.5 percent of sales) in 1963. The 1961 and 1962 net operating profits (and the corresponding profit ratios) were far smaller than those in any of the years 1955-59. The net operating profit (and the corresponding profit ratio) in 1963 was appreciably larger than that in 1958, but substantially smaller than in each of the years 1955, 1956, and 1959. The aggregate net operating profit in 1963 was appreciably larger than that in 1957, but the ratio of net operating

^{1/} Two of the six firms operate on an accounting year ended June 30. Data for these concerns for the accounting year ended June 30, 1964, are shown in table 12 under 1963, and data for the accounting year ended June 30, 1963, are shown under 1962, and so forth. Therefore, the data for 1964 are not shown in table 12.

profits to net sales was about the same in both years. Four of the six firms sustained net operating losses in 1960, three firms sustained losses in 1961, and two firms sustained losses in 1962; all six firms realized net operating profits in 1963, and three of the four firms which reported data for 1964 realized profits in that year.

The aggregate operating loss in 1960 and the low aggregate profits in 1961 and 1962 reflected in large part the change by the producers from a freight-equalized-price basis to a delivered-price basis. In the two years 1961-62, for example, freight prepaid by the 6 producers was equivalent to 6.6 percent of their gross sales * * * ; comparable data are not available for earlier years, but the corresponding ratios in 1959 and earlier years would have been far smaller. The operating loss in 1960 also reflected a very substantial decline in shipments in that year. The moderate improvement in profits in each of the years 1961 and 1962 was attributable in part to the price increases in mid-1960 and early 1962 (table 10); an additional factor in 1962 was the increased volume of shipments (table 4). The substantial improvement in aggregate profits in 1963 reflected further increases in both shipments and prices.

SHEET GLASS

Appendix A

Table 1.--Sheet glass weighing over 4 ounces per square foot: U.S. rates of duty provided in the Tariff Schedules of the United States (TSUS), effective Aug. 31, 1963 1/

(In cents per pound and percent ad valorem)

Item	TSUS appendix <u>2/</u> Article	TSUS item	Statutory rate <u>3/</u>	Trade- agreement rate <u>4/</u>	Escape- action rate <u>5/</u>
	Glass (including blown or drawn glass, but excluding cast or rolled glass and excluding pressed or molded glass) (whether or not containing wire netting), in rectangles, not ground, not polished and not otherwise processed, weighing over 4 oz. per sq. ft., provided for in TSUS items 542.11-.98, inclusive:				
	Ordinary glass:				
	Weighing over 4 oz. but not over 12 oz. per sq. ft.:				
923.11	Measuring not over 40 united inches---	542.11	1.5¢	0.7¢	1.3¢
923.13	Measuring over 40 united inches-----	542.13	1.9¢	.9¢	1.6¢
	Weighing over 12 oz. but not over 16 oz. per sq. ft.:				
923.21	Measuring not over 40 united inches---	542.21	2.1¢	1.0¢	1.3¢
923.23	Measuring over 40 but not over 60 united inches-----	542.23	2.4¢	1.1¢	1.6¢
923.25	Measuring over 60 united inches-----	542.25	2.5¢	1.2¢	1.9¢
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:				
923.31	Measuring not over 40 united inches---	542.31	1.5¢	.7¢	1.3¢
923.33	Measuring over 40 but not over 60 united inches-----	542.33	1.9¢	.9¢	1.6¢
923.35	Measuring over 60 but not over 100 united inches-----	542.35	2.4¢	1.1¢	1.9¢
923.37	Measuring over 100 united inches-----	542.37	2.8¢	1.4¢	2.4¢
	Weighing over 28 oz. per sq. ft.:				
923.42	Not over 2-2/3 sq. ft. in area-----	542.42	1.5¢	.7¢	1.3¢
923.44	Over 2-2/3 but not over 7 sq. ft. in area-----	542.44	1.9¢	.9¢	1.6¢
923.46	Over 7 but not over 15 sq. ft. in area-----	542.46	2.4¢	1.1¢	1.9¢
923.48	Over 15 but not over 16-2/3 sq. ft. in area-----	542.48	2.8¢	1.4¢	2.4¢
923.49	Over 16-2/3 sq. ft. in area-----	542.48	2.8¢	1.4¢	3.5¢

See footnotes at end of table.

Table 1.--Sheet glass weighing over 4 ounces per square foot: U.S. rates of duty provided in the Tariff Schedules of the United States (TSUS), effective Aug. 31, 1963 1/--Continued

(In cents per pound and percent ad valorem)

Item	TSUS appendix <u>2/</u> Article	TSUS item	Statutory rate <u>3/</u>	Trade- agreement rate <u>4/</u>	Escape- action rate <u>5/</u>
	Glass (including blown or drawn glass, * * * provided for in TSUS items 542.11-.98, inclusive:--Continued				
	Colored or special glass:				
923.57	• Weighing over 4 oz. but not over 12 oz. per sq. ft.-----	542.57	4.0¢	1.7¢	2.2¢
923.67	Weighing over 12 oz. but not over 16 oz. per sq. ft.-----	542.67	13.0¢	6.0¢	9.0¢
	Weighing over 16 oz. but not over 28 oz. per sq.ft.:				
923.71	Measuring not over 40 united inches--	542.71	1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%
923.73	Measuring over 40 but not over 60 united inches-----	542.73	1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%
923.75	Measuring over 60 but not over 90 united inches-----	542.75	2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%
923.77	Measuring over 90 united inches--	542.77	2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%
	Weighing over 28 oz. per sq. ft.:				
923.92	Not over 2-2/3 sq. ft. in area-----	542.92	1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%
923.94	Over 2-2/3 but not over 7 sq. ft. in area-----	542.94	1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%
923.96	Over 7 but not over 15 sq. ft. in area-----	542.96	2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%
923.98	Over 15 but not over 16-2/3 sq. ft. in area-----	542.98	2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%
923.99	Over 16-2/3 sq. ft. in area-----	542.98	2.8¢ + 5%	1.4¢ + 2.5%	3.5¢ + 2.5%
924.00	Glass, cut to other than rectangular shape, and: glass, whether in rectangles or cut to other than rectangular shape, subjected to pro- cessing, all the foregoing glass provided for: in TSUS item 544.17 if drawn or blown and not containing wire netting and not surface ground or polished-----	544.17	60%	15%	22.5%

1/ The rates of duty provided in the TSUS and the TSUS appendix were placed in effect by Presidential Proclamation No. 3548.

2/ TSUS rates of duty and descriptions of articles that were the subject of Presidential proclamations under the escape-clause procedure are shown in the TSUS appendix.

3/ Rates of duty currently applied pursuant to sections 231 and 257(e) of the Trade Expansion Act of 1962 to the products of countries or areas designated as Communist dominated or controlled, except the rates on TSUS appendix items 923.49 and 923.99. The applicable rates on these two items are the higher escape-action rates.

4/ The most recent rates of duty placed in effect as a result of a concession granted under the General Agreement on Tariffs and Trade, as modified by proclamation of the TSUS. The rates provided in the concession were in effect until June 17, 1962.

5/ Temporary rates of duty placed in effect June 17, 1962, by Presidential Proclamation No. 3455 under the escape-clause procedure, as modified by proclamation of the TSUS.

Table 2.--Sheet glass weighing over 4 ounces per square foot: Average ad valorem equivalents of U.S. specific rates of duty ^{1/} imposed on sheet glass entitled to most-favored-nation tariff treatment, imported during 1961, 1963, and 1964

Description	Average ad valorem equivalents		
	1961 ^{2/}	1963 ^{2/}	1964
	Percent	Percent	Percent
Sheet glass weighing not over 28 ounces per square foot and measuring in united inches--			
Not over 40-----	8.3	17.6	18.3
Over 40 but not over 60-----	13.3	27.8	26.2
Over 60 but not over 100-----	14.6	29.3	27.2
Over 100-----	17.1	31.2	30.6
Sheet glass weighing over 28 ounces per square foot and measuring in square feet--			
Not over 2-2/3-----	11.4	25.2	22.9
Over 2-2/3 but not over 7-----	12.1	25.4	25.1
Over 7 but not over 15-----	14.3	27.9	27.0
Over 15 ^{3/} -----	17.2	56.9	53.6

^{1/} The ad valorem equivalents shown here do not include the 2½ percent ad valorem additional rate of duty applicable to sheet glass when bent, beveled, colored, etc.

^{2/} Under the Tariff Act of 1930 the determination of the applicable rates of duty to imports of sheet glass was based on the surface area of the glass (in square inches). Under the TSUS the determination of the applicable rate of duty for glass weighing not over 28 ounces per square foot is based on the dimensional measurements of the glass (i.e., united inches; the term united inches refers to the sum of the length plus the width) whereas the determination of the applicable rate of duty for glass weighing over 28 ounces per square foot continues to be based on the surface area of the glass (now reported in square feet). Under the TSUS the surface area brackets for the heavier glass were modified slightly to bring the tariff provisions more closely into conformity with existing trade practices.

In calculating the equivalents for the provisions shown above for 1961 and for the January-August portion of 1963 the following allocations were used:

Sheet glass weighing--		Sheet glass
Not over 28 ounces per square foot (united inches)	Over 28 ounces per square foot (square feet)	(all weights) (square inches)
Not over 40	Not over 2-2/3	Not over 384
Over 40 but not over 60	Over 2-2/3 but not over 7	Over 384 but not over 864
Over 60 but not over 100	Over 7 but not over 15	Over 864 but not over 2400
Over 100	Over 15	Over 2400

^{3/} The glass used in computing these ad valorem equivalents consisted preponderantly of glass measuring over 16-2/3 square feet (2,400 square inches) in area and dutiable at 3.5 cents per pound; however, a small quantity of glass measuring between 15 square feet (2,160 square inches) and 16-2/3 square feet in area and dutiable at 2.4 cents per pound was also included. The inclusion of the glass in the latter bracket did not materially affect the ad valorem equivalents shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Sheet glass: Indexes of U.S. producers' shipments of sheet glass, apparent U.S. consumption of sheet glass, and selected U.S. business indicators, 1955-64

(1957-59=100)

Year	U.S. producers' shipments of sheet glass 1/	Apparent U.S. consumption of sheet glass 2/	Selected U.S. business indicators		
			Total industrial production 3/	Residential construction 4/	Automobile production 5/
1955	121	111	91	110	139
1956	120	115	100	98	103
1957	95	89	101	91	112
1958	85	86	94	96	80
1959	120	126	106	113	108
1960	96	101	109	99	131
1961	97	99	110	99	109
1962	110	115	118	109	136
1963	118	118	124	113	150
1964 6/	116	121	132	113	151

1/ Based on the number of pounds shipped. Includes exports.

2/ Based on the number of pounds of U.S. producers' shipments, less exports, plus imports for consumption.

3/ Based on the Federal Reserve Index of Quantity Output. Includes durable and nondurable goods, mining, and utilities.

4/ Based on the value of public residential and nonfarm private residential construction put in place, adjusted to constant dollars.

5/ Based on the Federal Reserve Index of Quantity Output.

6/ Preliminary.

Source: Computed from official statistics of the U.S. Department of Commerce, the Board of Governors of the Federal Reserve System, and from data supplied to the U.S. Tariff Commission by the domestic producers of sheet glass.

Table 4.--Sheet glass: ^{1/} Shipments by U.S. producers, U.S. exports of domestic merchandise, U.S. imports for consumption, and apparent U.S. consumption, 1955-64

Item	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Shipments by U.S. producers	1,590.0	1,576.2	1,256.6	1,117.3	1,580.0	1,265.7	1,273.8	1,443.2	1,556.0	1,530.0
U.S. exports	5.3	3.9	2.5	3.0	3.2	4.3	3.0	3.5	3.9	3.8
U.S. imports for consumption										
At most-favored-nation rates of duty	238.5	312.1	210.8	292.4	491.4	391.3	350.0	435.0	376.3	446.3
At full rates of duty	6.8	17.9	3.2	11.0	15.6	19.2	25.4	35.6	17.5	32.3
Total (all rates of duty)	245.3	330.0	214.0	303.4	507.0	410.5	375.4	470.6	393.8	478.6
Apparent U.S. consumption	1,830.0	1,902.3	1,466.1	1,417.7	2,083.8	1,671.9	1,650.2	1,910.3	1,945.9	2,004.3
	Quantity (million pounds)									
	Percent of U.S. consumption									
Share supplied by--										
Shipments ^{5/} by U.S. producers	86.6	82.7	85.4	78.6	75.7	75.4	77.2	75.4	79.8	76.1
U.S. imports for consumption										
At most-favored-nation rates of duty	13.0	16.4	14.4	20.6	23.6	23.4	21.3	22.8	19.3	22.3
At full rates of duty	.4	.9	.2	.8	.7	1.2	1.5	1.8	.9	1.6
Total (all rates of duty)	13.4	17.3	14.6	21.4	24.3	24.6	22.8	24.6	20.2	23.9

^{1/} Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable in accordance with escape-clause provisions under TSUS items 923.11-924.00, inclusive. Such imports are reported statistically under TSUSA items 542.1100-542.9840, inclusive, and item 544.1720.

^{2/} All data except shipments by U.S. producers are preliminary.

^{3/} Official statistics are reported in square feet and have been converted to pounds at the ratio of 1 sq. ft.=1.16 pounds. Data do not include colored glass; it is believed, however, that exports of colored glass are considerably smaller than exports of glass not colored.

^{4/} Includes imported float glass, beginning in 1960 through Aug. 31, 1963; the quantity of float glass imported is very small compared with that of total imports of sheet glass.

^{5/} Less exports.

Source: Compiled from official statistics of the U.S. Department of Commerce, and from information submitted to the U.S. Tariff Commission by U.S. producers.

Table 5. Sheet glass: 1/ Shipments by U.S. producers, 2/ and U.S. imports for consumption by thickness (weight per square foot) and by kinds, 1955-64

Item	Weighting per square foot--										Total	
	Less than : 16 ounces, total or average 3/	16 ounces or more, but not over 28 ounces	Over 28 ounces	Clear	Colored	Total or average	Clear	Colored	Total or average	Colored		Processed
1955												
U.S. shipments-----1,000 pounds	13,980	1,135,961	97,666	1,233,627	282,426	54,597	337,023	1,431,213	153,417	1,584,630	1/	1,584,630
U.S. imports-----do-----	20,073	128,671	2,661	131,332	78,460	652	79,112	225,329	4,124	245,263	15,810	245,263
Apparent U.S. consumption-----do-----	34,053	1,264,632	100,327	1,364,959	360,886	55,249	416,135	1,656,542	5/	1,829,893	5/	1,829,893
Ratio of imports to consumption-----percent-----	58.9	10.2	2.7	9.6	21.7	1.2	19.0	13.6	5/	13.4	5/	13.4
1956												
U.S. shipments-----1,000 pounds	16,605	1,176,360	42,837	1,219,197	278,758	57,691	336,449	1,470,326	101,925	1,572,251	1/	1,572,251
U.S. imports-----do-----	28,311	195,069	545	195,614	97,868	736	98,604	319,910	1,783	329,952	8,259	329,952
Apparent U.S. consumption-----do-----	44,916	1,371,429	43,382	1,414,811	376,626	58,427	435,053	1,790,236	5/	1,902,203	5/	1,902,203
Ratio of imports to consumption-----percent-----	63.0	14.2	1.3	13.8	26.0	1.3	22.7	17.9	5/	17.3	5/	17.3
1957												
U.S. shipments-----1,000 pounds	13,958	912,833	33,011	945,844	249,730	44,621	294,351	1,175,448	78,705	1,254,153	1/	1,254,153
U.S. imports-----do-----	17,090	118,560	346	118,906	75,755	601	76,356	210,857	1,337	214,010	1,816	214,010
Apparent U.S. consumption-----do-----	31,048	1,031,393	33,357	1,064,750	325,485	45,222	370,707	1,386,305	5/	1,468,163	5/	1,468,163
Ratio of imports to consumption-----percent-----	55.0	11.5	1.0	11.2	23.3	1.3	20.6	15.2	5/	14.6	5/	14.6
1958												
U.S. shipments-----1,000 pounds	13,424	800,016	14,846	814,862	248,303	37,660	285,963	1,061,441	53,108	1,114,249	1/	1,114,249
U.S. imports-----do-----	17,971	189,656	303	189,959	92,981	1,274	94,255	300,442	1,914	303,370	1,314	303,370
Apparent U.S. consumption-----do-----	31,395	989,672	15,149	1,004,821	341,284	38,934	380,218	1,361,883	5/	1,417,519	5/	1,417,519
Ratio of imports to consumption-----percent-----	57.2	19.2	2.0	18.9	27.2	3.3	24.8	22.0	5/	21.4	5/	21.4
1959												
U.S. shipments-----1,000 pounds	17,781	1,117,385	26,396	1,143,781	359,611	55,504	415,115	1,494,579	82,098	1,576,677	1/	1,576,677
U.S. imports-----do-----	32,942	325,550	645	326,195	144,648	326	144,974	502,558	2,937	506,983	1,498	506,983
Apparent U.S. consumption-----do-----	50,723	1,442,935	27,041	1,469,976	504,259	55,830	560,089	1,997,137	5/	2,083,660	5/	2,083,660
Ratio of imports to consumption-----percent-----	64.9	22.6	2.4	22.2	28.7	0.6	25.9	25.2	5/	24.3	5/	24.3
1960												
U.S. shipments-----1,000 pounds	15,211	810,983	16,282	827,265	369,274	48,626	417,900	1,195,362	65,014	1,260,376	1/	1,260,376
U.S. imports-----do-----	33,746	276,236	1,562	277,798	97,891	167	98,058	405,420	4,135	410,504	949	410,504
Apparent U.S. consumption-----do-----	48,957	1,087,219	17,844	1,105,063	467,165	48,793	515,958	1,600,782	5/	1,670,880	5/	1,670,880
Ratio of imports to consumption-----percent-----	68.9	25.4	8.8	25.1	21.0	0.3	19.0	25.3	5/	24.6	5/	24.6

See footnotes at end of table.

Table 5.--Sheet glass: 1/ Shipments by U.S. producers, 2/ and U.S. imports for consumption by thickness (weight per square foot) and by kinds, 1955-61--Continued

Item	Weighing per square foot--										Total	
	Less than 16 ounces, total or average 3/		16 ounces or more, but not over 28 ounces		Over 28 ounces		Clear	Colored	Processed	Total or average		
	Clear	Colored	Total or average	Clear	Colored	Total or average						
1961												
U.S. shipments-----1,000 pounds----	20,822	10,730	800,474	387,846	61,654	449,500	1,198,412	72,384	4/	1,270,795		
U.S. imports-----do-----	30,772	864	271,639	71,795	317	72,112	371,458	3,022	950	375,430		
Apparent U.S. consumption-----do-----	51,594	1,060,519	1,072,113	459,641	61,971	521,612	1,569,870	5/	5/	1,646,226		
Ratio of imports to consumption-----percent----	59.6	7.5	25.3	15.6	0.5	13.8	23.7	5/	5/	22.2		
1962												
U.S. shipments-----1,000 pounds----	25,462	8,816	890,686	466,552	57,014	523,566	1,373,884	65,830	4/	1,439,714		
U.S. imports-----do-----	40,165	612	262,389	165,769	536	166,305	466,400	2,238	1,916	470,554		
Apparent U.S. consumption-----do-----	65,627	1,143,647	1,153,075	632,321	57,550	689,871	1,840,284	5/	5/	1,910,268		
Ratio of imports to consumption-----percent----	61.2	22.9	22.8	26.2	0.9	24.1	25.3	5/	5/	24.6		
1963 6/												
U.S. shipments-----1,000 pounds----	25,462	9,628	924,854	545,490	56,260	601,750	1,486,178	65,888	4/	1,552,066		
U.S. imports-----do-----	38,325	200,633	201,569	162,902	728	163,630	389,371	3,283	1,161	393,815		
Apparent U.S. consumption-----do-----	63,787	1,115,859	1,126,423	708,392	56,988	765,380	1,875,549	5/	5/	1,945,381		
Ratio of imports to consumption-----percent----	60.1	18.0	17.9	23.0	1.3	21.4	20.8	5/	5/	20.2		
1964 6/												
U.S. shipments-----1,000 pounds----	30,102	904,654	917,356	547,520	31,262	578,782	1,482,276	43,964	4/	1,526,240		
U.S. imports-----do-----	52,033	244,755	245,943	177,550	1,384	178,934	473,699	3,212	1,724	478,635		
Apparent U.S. consumption-----do-----	82,135	1,149,409	1,163,299	725,070	32,646	757,716	1,955,975	5/	5/	2,004,875		
Ratio of imports to consumption-----percent----	63.3	21.3	21.1	24.5	4.2	23.6	24.2	5/	5/	23.9		

1/ Prior to Aug. 31, 1963, dutiable under par. 219 and 224 of the Tariff Act of 1930. Currently dutiable in accordance with the escape-clause provisions under TSUS items 923.11-924.00, inclusive. Such imports are reported statistically under TSUSA items 542.1100-542.9840, inclusive, and TSUSA item 544.1720.

2/ Excludes exports. Exports have been deducted from U.S. shipments of clear sheet glass weighing 16 ounces, but not over 28 ounces per square foot.

3/ Data for separate classifications have been combined in order to avoid disclosure of the operations of the individual producers.

4/ Data included under total colored glass in order to avoid disclosure of the operations of the individual producers.

5/ Not applicable.

6/ Import data are preliminary.

Source: Compiled from official statistics of the U.S. Department of Commerce, and from information submitted to the U.S. Tariff Commission by the producers.

Table 6.--U.S. producers' inventories of sheet glass, as of
Dec. 31 of 1954-64 ^{1/}

(In millions of pounds)

Date	Colored	Clear	Total
Dec. 31--			
1954-----	3.9	87.1	91.0
1955-----	3.9	51.0	54.9
1956-----	3.4	131.1	134.5
1957-----	8.8	103.3	112.1
1958-----	6.3	76.0	82.3
1959-----	7.7	115.9	123.6
1960-----	4.1	141.1	145.2
1961-----	4.4	97.7	102.1
1962-----	6.9	152.7	159.6
1963-----	7.6	124.8	132.4
1964-----	8.8	155.6	164.4

^{1/} Includes only inventories of glass inspected for defects and cut to the size in which it is intended to be sold; does not include inventories of glass intended to be recut before shipment.

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 7.--Sheet glass: ^{1/} U.S. imports for consumption, entered at most-favored-nation rates of duty, by tariff provisions, 1955-64

Item	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	
	Quantity (1,000 pounds)										
Sheet glass weighing not over 28 ounces per square foot and measuring in united inches--											
Not over 40	58,898	65,327	48,720	58,414	81,541	79,822	69,911	63,166	49,756	59,238	
Over 40 but not over 60	50,321	83,375	52,057	81,113	141,003	102,664	103,378	117,512	100,357	117,435	
Over 60 but not over 100	28,098	42,762	23,831	48,323	93,484	69,460	63,652	82,287	76,641	91,330	
Over 100	13,863	20,416	10,872	19,708	40,912	44,555	41,826	16,357	8,741	10,953	
Total, weighing not over 28 ounces per square foot--	151,180	211,880	135,480	207,558	356,940	296,201	278,767	279,322	235,495	278,956	
Sheet glass weighing over 28 ounces per square foot and measuring in square feet--											
Not over 2-2/3	51,786	47,978	44,567	37,443	54,966	31,332	16,204	34,910	21,605	20,391	
Over 2-2/3 but not over 7	4,506	5,968	5,019	5,883	10,234	11,883	7,192	12,239	15,768	20,009	
Over 7 but not over 15	5,701	8,704	3,357	5,386	8,744	5,248	5,309	12,244	15,742	15,054	
Over 15	25,337	37,517	22,335	36,092	60,531	46,654	42,554	96,273	87,731	110,192	
Total, weighing over 28 ounces per square foot--	87,350	100,167	75,278	84,804	134,475	95,117	71,259	155,666	140,846	165,646	
Grand total at most-favored-nation rates of duty--	238,530	312,047	210,758	292,362	491,415	391,318	350,026	434,988	376,341	444,602	
	Foreign value (1,000 dollars)										
Sheet glass weighing not over 28 ounces per square foot and measuring in united inches--											
Not over 40	4,456	4,175	3,308	3,812	5,422	6,055	5,599	4,767	3,895	4,201	
Over 40 but not over 60	3,698	5,103	3,188	5,068	9,064	6,707	6,931	7,110	5,787	7,173	
Over 60 but not over 100	1,969	2,858	1,583	3,208	6,354	4,842	4,772	5,633	4,974	6,386	
Over 100	1,101	1,526	835	1,447	3,231	3,293	3,432	1,309	672	859	
Total, weighing not over 28 ounces per square foot--	11,224	13,662	8,914	13,535	24,071	20,997	20,734	18,819	15,328	18,619	
Sheet glass weighing over 28 ounces per square foot and measuring in square feet--											
Not over 2-2/3	3,406	3,121	2,679	2,489	3,627	1,814	996	1,924	1,114	1,158	
Over 2-2/3 but not over 7	385	481	411	479	798	813	535	784	994	1,275	
Over 7 but not over 15	416	646	262	420	682	382	409	907	1,072	1,059	
Over 15	2,092	2,992	1,681	2,610	4,653	3,480	3,463	6,846	5,352	6,945	
Total, weighing over 28 ounces per square foot--	6,299	7,240	5,033	5,998	9,760	6,489	5,403	10,461	8,532	10,437	
Grand total at most-favored-nation rates of duty--	17,523	20,902	13,947	19,533	33,831	27,486	26,137	29,280	23,860	29,056	

^{1/} Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable in accordance with escape-clause provisions under TSUS items 923.11-924.00, inclusive. Such imports are reported statistically under TSUSA items 542.1100-542.9840, inclusive. The classification provisions for sheet glass under the Tariff Act of 1930 were stated in a slightly different form than the TSUS provisions shown above. Imports under the Tariff Act of 1930 have been allocated to the TSUS provisions on the basis of the conversion factors shown in table 1, footnote 2.

^{2/} Preliminary.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 8. --Sheet glass: 1/ U.S. imports for consumption, by principal sources, 1955-64

Country	1955	1956	1957	1958	1959	1960	1961	1962	1963 2/	1964 2/
	Quantity (1,000 pounds)									
Belgium	32,060	130,311	69,720	110,074	167,473	150,009	107,046	153,950	111,325	115,337
Japan	22,421	33,970	15,690	34,107	69,174	58,042	56,008	59,357	67,025	78,416
West Germany	20,608	23,384	24,889	38,247	49,730	42,658	39,599	49,204	44,463	46,196
France	27,792	35,861	26,572	37,575	48,925	34,453	30,993	35,684	31,625	35,217
United Kingdom 3/	21,274	29,856	21,208	30,313	66,538	43,213	44,636	51,511	30,339	25,527
Finland	816	1,077	1,034	2,847	12,454	10,221	7,728	10,715	12,286	16,804
Sweden	2,308	3,728	5,256	8,556	12,430	15,887	18,975	12,340	11,021	10,769
Canada	28,364	12,509	7,396	8,733	11,798	9,440	9,404	7,001	11,177	10,432
All other	23,247	41,348	18,993	21,810	32,893	27,095	32,837	55,526	54,070	79,127
Total	236,890	312,047	210,758	292,362	491,415	391,310	350,022	434,263	375,341	415,327
Communist-dominated countries at full rates of duty	6,733	17,905	3,252	11,008	15,568	19,136	25,404	35,566	17,474	32,323
Grand total	245,623	329,952	214,010	303,370	506,983	410,504	375,430	470,554	393,815	476,635
	Foreign value (1,000 dollars)									
Belgium	6,325	8,254	5,421	6,919	12,044	9,608	7,364	9,324	7,025	9,732
Japan	1,086	1,861	812	1,959	4,529	3,965	4,246	4,112	4,160	5,217
West Germany	1,496	1,804	1,837	2,834	3,818	3,327	3,551	3,880	3,335	3,535
France	2,274	2,761	2,182	3,028	4,022	3,173	2,955	2,928	2,476	2,392
United Kingdom 3/	1,388	1,940	1,407	2,010	4,662	3,108	3,444	3,360	1,980	1,671
Finland	41	63	63	145	695	632	443	571	662	874
Sweden	130	242	310	513	889	1,012	1,272	828	624	629
Canada	3,377	1,014	648	683	981	754	675	435	684	598
All other	1,406	2,963	1,267	1,442	2,191	1,997	2,187	3,242	2,914	4,499
Total	17,523	20,902	13,947	19,533	33,831	27,486	26,137	29,280	23,860	29,170
Communist-dominated countries at full rates of duty	536	1,096	153	408	579	697	905	1,208	617	1,271
Grand total	18,059	21,998	14,100	19,941	34,410	28,183	27,042	30,488	24,477	30,741

1/ Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable in accordance with escape-clause provisions under TSUS items 923.11-924.00, inclusive. Such imports are reported statistically under TSUSA items 524.1100-542.9840, inclusive, and TSUSA item 544.1720.

2/ Preliminary.

3/ Imports of float glass, which began in 1960 are included through Aug. 31, 1963; the quantity of float glass imported is very small compared with that of total imports of sheet glass.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 9. Employment in U.S. establishments in which sheet glass was produced, 1955-64

Item	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
All employees, average number	9,503	9,630	9,885	9,011	11,442	10,283	9,979	10,922	10,657	10,938
Production and related workers making										
All products:										
Average number	8,457	8,590	8,532	7,659	9,987	8,801	8,572	9,505	9,109	9,369
Man-hours worked--1,000 hours	16,659	17,153	14,543	14,199	19,916	17,412	17,046	19,291	18,644	18,447
Sheet glass:										
Average number $\frac{1}{1,000}$ hours	8,237	8,461	7,926	6,502	8,209	6,874	6,420	7,385	7,110	7,261
Man-hours worked--1,000 hours	16,218	16,899	13,517	12,053	16,364	13,593	12,775	14,994	14,542	14,301
Other products:										
Average number $\frac{1}{1,000}$ hours	220	129	606	1,157	1,778	1,927	2,152	2,120	1,999	2,108
Man-hours worked--1,000 hours	441	254	1,026	2,146	3,552	3,819	4,271	4,297	4,102	4,146

$\frac{1}{1}$ Estimated.

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 10.--Single-strength sheet glass: Tariff Commission indexes of prices of glass produced in the United States and delivered to direct-factory buyers in certain U.S. cities, 1/ and price indexes reported by the Bureau of Labor Statistics, 2/ 1957-59 base period to May 1, 1965

(1957-59=100)

Period or date	Index of prices of sheet glass delivered to customers in--										BLS index for single-strength glass
	Boston	New York	Miami	New Orleans	Chicago	Pittsburgh	Los Angeles	Average			
1957-59	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1960:											
May 1	86.6	90.2	84.5	92.6	94.3	96.7	86.2	90.2	90.2	90.2	93.3
Nov. 1	90.7	94.3	88.5	96.7	98.3	100.2	90.2	94.1	94.1	94.1	97.0
1961:											
May 1	90.7	94.3	88.5	96.7	98.3	100.2	90.2	94.1	94.1	94.1	97.0
Nov. 1	90.7	94.3	88.5	96.7	98.3	100.2	90.2	94.1	94.1	94.1	97.0
1962:											
May 1	95.9	99.5	93.8	101.9	103.6	105.5	95.5	99.4	99.4	99.4	101.8
Nov. 1	95.9	99.5	93.8	101.9	103.6	105.5	95.5	99.4	99.4	99.4	101.8
1963:											
May 1	95.9	99.5	93.8	101.9	103.6	105.5	95.5	99.4	99.4	99.4	101.8
Nov. 1	101.9	105.5	99.8	107.9	109.6	111.5	101.5	105.4	105.4	105.4	110.9
1964:											
May 1	107.8	111.8	105.4	114.5	116.4	118.6	107.3	111.7	111.7	111.7	115.8
Nov. 1	107.8	111.8	105.4	114.5	116.4	118.6	107.3	111.7	111.7	111.7	116.7
1965:											
May 1	106.7	110.7	104.3	113.4	115.2	117.4	106.2	110.6	110.6	110.6	3/

1/ Based on prices paid for 19-ounce glass by direct factory buyers. Prices in effect during 1957-59, were freight-equalized prices. Prices in effect on subsequent dates were delivered prices.

2/ BLS data are a composite for all of the United States. Until early in 1964, the indexes of prices of 19-ounce glass were also indicative of the price trends of all other important thicknesses.

3/ Not available.

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers, and from indexes published by the Bureau of Labor Statistics.

Table 11.---Delivered prices of representative sizes of domestic and West European sheet glass to direct - factory buyers in New York City on selected dates, 1960-65

Description and date	Delivered price	Delivered price	Amount or percent by which the West	
	of domestic glass (per 100 sq.ft.)	of West European glass (per 100 sq.ft.)	European glass was lower in delivered price than the domestic	(per pound) : (percent)
Single strength "B" (19 ounces)				
Over 50, not over 60 united inches:				
November 1, 1960	\$ 9.38	\$ 8.64	\$0.74	7.9
May 1, 1961	9.38	8.64	0.74	7.9
November 1, 1961	9.38	8.64	0.74	7.9
May 1, 1962	9.85	8.64	1.21	12.3
November 1, 1962	9.85	9.50	0.35	3.6
May 1, 1963	9.85	9.32	0.53	5.4
November 1, 1963	10.53	9.94	0.59	5.6
May 1, 1964	11.06	10.41	0.65	5.9
November 1, 1964	11.06	10.41	0.65	5.9
May 1, 1965 2/	10.95	10.21	0.74	6.8
Heavy sheet "B" (3/16 inches)				
Over 16-2/3, not over 25 square feet: 3/				
November 1, 1960	24.48	22.31	2.17	8.9
May 1, 1961	24.48	22.31	2.17	8.9
November 1, 1961	24.48	22.31	2.17	8.9
May 1, 1962	25.71	22.31	3.40	13.2
November 1, 1962	25.71	24.54	1.17	4.6
May 1, 1963	25.71	24.54	1.17	4.6
November 1, 1963	26.99	25.72	1.27	4.7
May 1, 1964	26.99	25.72	1.27	4.7
November 1, 1964	26.99	25.72	1.27	4.7
May 1, 1965 2/	26.72	25.23	1.49	5.6

1/ In effect for about 2 months.

2/ The price changes shown for May 1, 1965 reflect changes in the terms-of-payment discounts by both the U.S. producers and the foreign manufacturers. The U.S. producers increased their "cash" discount from 1 to 2 percent late in 1964 whereas the foreign manufacturers increased their discount from 3 percent to 5 percent early in 1965.

3/ On or about June 4, 1962, the West European manufacturers "carved" this size bracket out of the "over 10, not over 25 square feet" bracket, but the domestic manufacturers did not do so. The former producers also consolidated the remainder of the bracket with the next smaller one.

Source: Compiled from manufacturers' and sales agents' price lists.

Note.---Prices reflect packing discounts and payment discounts. Customs brokerage, loading, and trucking charges have been added to the prices of the imported glass in effect on Nov. 1, 1962 and subsequent dates.

Table 12.--Sheet Glass: Profit-and-loss experience of '6 domestic producers on their sheet glass operations for 1955-1963

Year	Net sales and intracompany transfers	Net operating profit or (loss) before income taxes	Ratio of net operating profit or (loss) to net sales
	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>Percent</u>
1955-----	128,901	30,056	23.3
1956-----	126,810	25,502	20.1
1957-----	104,290	10,007	9.6
1958-----	94,822	6,349	6.7
1959-----	128,371	17,276	13.4
1960-----	<u>1/</u>	<u>1/</u>	<u>1/</u>
1961-----	107,390	1,346	1.3
1962-----	121,962	3,265	2.7
1963-----	130,938	12,417	9.5

1/ Publication of 1960 data would disclose individual company operations.

Source: Compiled from information submitted to the U.S. Tariff Commission by the domestic producers.

