



Canadian International
Trade Tribunal

Tribunal canadien du
commerce extérieur

CANADIAN
INTERNATIONAL
TRADE TRIBUNAL

Dumping and Subsidizing

DETERMINATION AND REASONS

Preliminary Injury Inquiry
No. PI-2017-003

Copper Pipe Fittings

*Determination issued
Wednesday, December 27, 2017*

*Reasons issued
Thursday, January 11, 2018*

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IN THE MATTER OF a preliminary injury inquiry, pursuant to subsection 34(2) of the *Special Import Measures Act*, respecting:

COPPER PIPE FITTINGS

PRELIMINARY DETERMINATION OF INJURY

The Canadian International Trade Tribunal, pursuant to the provisions of subsection 34(2) of the *Special Import Measures Act*, has conducted a preliminary injury inquiry into whether the evidence discloses a reasonable indication that the alleged injurious dumping and subsidizing of pressure pipe fittings and drainage, waste and vent pipe fittings, made of cast copper alloy, wrought (or “wrot”) copper alloy or wrought copper for use in heating, plumbing, air conditioning and refrigeration applications, originating in or exported from the Socialist Republic of Vietnam, restricted to the products enumerated in the attached Appendix 1 (the subject goods), have caused injury or retardation or are threatening to cause injury to the domestic industry.

This preliminary injury inquiry follows the notification, on October 27, 2017, that the President of the Canada Border Services Agency had initiated investigations into the alleged injurious dumping and subsidizing of the above-mentioned goods.

Pursuant to subsection 37.1(1) of the *Special Import Measures Act*, the Canadian International Trade Tribunal hereby determines that there is evidence that discloses a reasonable indication that the dumping and subsidizing of the above-mentioned goods have caused or are threatening to cause injury to the domestic industry.

Serge Fréchette
Serge Fréchette
Presiding Member

Daniel Petit
Daniel Petit
Member

Rose Ritcey
Rose Ritcey
Member

The statement of reasons will be issued within 15 days.

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STATEMENT OF REASONS

INTRODUCTION

1. The Canadian International Trade Tribunal (the Tribunal) commenced this preliminary injury inquiry on October 30, 2017, to determine whether there is a reasonable indication that the alleged injurious dumping and subsidizing of copper pipe fittings originating in or exported from the Socialist Republic of Vietnam (Vietnam) (the subject goods) have caused injury or are threatening to cause injury to the domestic industry.

2. This preliminary injury inquiry stems from a complaint filed by Cello Products Inc. (Cello) and the subsequent initiation of dumping and subsidizing investigations by the President of the Canada Border Services Agency (CBSA).

3. On December 27, 2017, pursuant to subsection 37.1(1) of the *Special Import Measures Act*,¹ the Tribunal determined that there was evidence disclosing a reasonable indication that the subject goods have caused or are threatening to cause injury to the domestic industry, for the reasons that follow.

PRODUCT DEFINITION

4. For the purposes of the CBSA's investigations and this preliminary injury inquiry, the subject goods are defined as follows:²

Pressure pipe fittings and drainage, waste and vent pipe fittings, made of cast copper alloy, wrought (or "wrot") copper alloy or wrought copper for use in heating, plumbing, air conditioning and refrigeration applications, originating in or exported from the Socialist Republic of Vietnam, restricted to the products enumerated in the attached Appendix 1.

CBSA'S DECISION TO INITIATE INVESTIGATIONS

5. On October 27, 2017, the CBSA initiated dumping and subsidizing investigations pursuant to subsection 31(1) of *SIMA*. In its statement of reasons concerning the initiation of those investigations, the CBSA estimated that for the period of September 1, 2016, to August 31, 2017, the subject goods were dumped by a margin of dumping of 28.1 percent and subsidized by an amount of subsidy of 32.6 percent, both expressed as a percentage of the export price.³

6. The CBSA further determined that the estimated margin of dumping and amount of subsidy were not insignificant and that the estimated volume of dumped and subsidized goods was not negligible.⁴

POSITIONS OF THE PARTIES

7. The Tribunal received one submission, from the Trade Remedies Authority of Vietnam (TRAV), opposing the injury allegations in the complaint and Cello's reply to that submission.

8. Cello submitted that it filed the present complaint on September 11, 2017, against the backdrop of the Tribunal's decision in late 2016 to continue its orders concerning the dumping of copper pipe fittings originating in or exported from the United States and Korea, and the dumping and subsidizing of such goods

1. R.S.C., 1985, c. S-15 [*SIMA*]

2. Exhibit PI-2017-003-05, Vol. 1B at 218.

3. *Ibid.* at 226, 230.

4. *Ibid.* at 222, 235.

originating in or exported from China.⁵ In *Copper Pipe Fittings* (Expiry Review No. RR-2015-003), the Tribunal referred to evidence that low-priced imports from Vietnam had “gained substantial market share and forced Cello to keep its prices low” during the period of review (i.e. January 1, 2013, to March 31, 2016) and that it expected such goods would continue to negatively affect Cello’s prices and sales in the near term.⁶ According to Cello, this is entirely in accord with its recent experience in the Canadian market, and it now claims to have suffered material injury due to the dumping and subsidizing of the subject goods.

9. In support of its injury allegations, Cello provided evidence of increased volumes of imports of the subject goods, price undercutting, price depression, price suppression, decreased production volumes and capacity utilization, loss of sales volumes and market share, loss of employment and declined financial performance in the domestic market, including the deterioration of gross margins.

10. In addition, Cello submitted that the dumping and subsidizing of the subject goods are threatening to cause injury to it. Cello alleged that a rapid increase in imports of the subject goods, particularly between 2015 and 2016, combined with severe price undercutting, indicates a likelihood of substantially increased imports in the near term. Cello provided information on the disposable capacity of a known producer and exporter of the subject goods to Canada and alleged that the company has plans to expand its production and is highly export-dependent. Cello indicated that producers of the subject goods in Vietnam will look to export their products as demand in Vietnam is likely to decline in the near term. Further, Cello argued that the prices of the subject goods are likely to continue to undercut and depress domestic prices.

11. TRAV submitted that the evidence does not disclose a reasonable indication that the dumping and subsidizing of the subject goods have caused injury or are threatening to cause injury to the domestic industry.

ANALYSIS

Legislative Framework

12. The Tribunal’s mandate in a preliminary injury inquiry is set out in subsection 34(2) of *SIMA*, which requires the Tribunal to determine “. . . whether the evidence discloses a reasonable indication that the dumping or subsidizing of the [subject] goods has caused injury or retardation or is threatening to cause injury.”⁷

13. The “reasonable indication” standard that applies in a preliminary injury inquiry is lower than the evidentiary threshold that applies in a final injury inquiry under section 42 of *SIMA*.⁸ The term “reasonable

5. In *Copper Pipe Fittings* (28 November 2016), RR-2015-003 (CITT) [*Copper Pipe Fittings* (RR-2015-003)], the Tribunal continued, with amendment to exclude certain products, its orders in Expiry Review No. RR-2011-001, which continued, without amendment, its findings in Inquiry No. NQ-2006-002 concerning the dumping of copper pipe fittings originating in or exported from China, the United States and Korea, and the subsidizing of such goods originating in or exported from China.

6. *Copper Pipe Fittings* (RR-2015-003) at paras. 65-66.

7. For injury inquiries under section 42 of *SIMA* that involve a single subject country, the Tribunal’s practice is to make a cumulative assessment of the injurious effects of goods that are both dumped and subsidized (cross-cumulation). The Tribunal therefore considers that it would be inconsistent not to cross-cumulate the subject goods in a preliminary injury inquiry and has consequently assessed the cumulative effects of the dumping and subsidizing of the subject goods on the domestic industry.

8. *Grain Corn* (10 October 2000), PI-2000-001 (CITT) at 7.

indication” is not defined in *SIMA*, but is understood to mean that the evidence need not be “. . . conclusive, or probative on a balance of probabilities”⁹

14. The Tribunal has previously been satisfied that the threshold for the “reasonable indication” standard was met where¹⁰

- the alleged injury or threat of injury is substantiated by evidence that is sufficient in the sense that it is “relevant, accurate and adequate”; and,
- in light of the evidence, the allegations stand up to a “somewhat probing examination”, even if the theory of the case might not seem convincing or compelling.

15. Generally, the evidence at the preliminary phase of proceedings will be significantly less detailed and comprehensive than the evidence in a final injury inquiry. Not all the evidence is available at the preliminary phase, and there is no oral hearing to fully probe what is available. Accordingly, the evidence will not be tested to the same extent as it would be during a final injury inquiry. The Tribunal will give complainants the benefit of the doubt.

16. While complaints will be read generously, the outcome of preliminary inquiries must not be taken for granted.¹¹ Simple assertions are not sufficient.¹² Complaints, as well as the cases of parties opposed, must be supported by positive evidence that is sufficient and relevant, in that it addresses the necessary requirements in *SIMA* and the relevant factors of the *Special Import Measures Regulations*.¹³

17. In making its preliminary determination of injury, the Tribunal takes into account the factors prescribed in section 37.1 of the *Regulations*, including the import volumes of the dumped and subsidized goods, the effect of the dumped and subsidized goods on the price of like goods, the resulting economic impact of the dumped and subsidized goods on the domestic industry and, if injury or threat of injury¹⁴ is found to exist, whether a causal relationship exists between the dumping and subsidizing of the goods and the injury or threat of injury.

18. Before examining the allegations of injury or threat of injury, the Tribunal must, however, address a number of framework issues. Specifically, the Tribunal must first identify the domestically produced goods

9. *Ronald A. Chisholm Ltd. v. Deputy M.N.R.C.E.* (1986), 11 CER 309 (FCTD).

10. *Gypsum Board* (5 August 2016), PI-2016-001 (CITT) [*Gypsum Board*] at para 16; *Concrete Reinforcing Bar* (12 August 2014), PI-2014-001 (CITT) [*Rebar*] at para. 15; *Silicon Metal* (21 June 2013), PI-2013-001 (CITT) at para. 16; *Unitized Wall Modules* (3 May 2013), PI-2012-006 (CITT) [*Unitized Wall Modules*] at para. 24; *Liquid Dielectric Transformers* (22 June 2012), PI-2012-001 (CITT) at para. 86.

11. *Rebar* at paras. 18-19.

12. Article 5 of the World Trade Organization (WTO) *Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994* [the *Anti-dumping Agreement*] and Article 11 of the WTO *Agreement on Subsidies and Countervailing Measures* [the *SCM Agreement*] require an investigating authority to examine the accuracy and adequacy of the evidence provided in a dumping and subsidizing complaint to determine whether there is sufficient evidence to justify the initiation of an investigation, and to reject a complaint or to terminate an investigation as soon as an investigating authority is satisfied that there is not sufficient evidence of dumping and subsidizing or injury. Article 5 of the *Anti-dumping Agreement* and Article 11 of the *SCM Agreement* also specify that simple assertions that are not substantiated with relevant evidence cannot be considered sufficient to meet the requirements of the articles.

13. S.O.R./84-927 [*Regulations*].

14. In its consideration of whether there is a reasonable indication that the dumping and subsidizing of the subject goods are threatening to cause injury, the Tribunal is guided by subsection 37.1(2) of the *Regulations*, which prescribes factors to be taken into account for the purposes of its threat of injury analysis.

that are “like goods” in relation to the subject goods, as well as the domestic industry that produces those like goods. This analysis is required because subsection 2(1) of *SIMA* defines “injury” as “. . . material injury to a domestic industry” and “domestic industry” as “. . . the domestic producers as a whole of the like goods or those domestic producers whose collective production of the like goods constitutes a major proportion of the total domestic production of the like goods . . .” Subsection 2(1) of *SIMA* further defines “like goods”, in relation to any other goods, as “(a) goods that are identical in all respects to the other goods, or (b) in the absence of any goods described in paragraph (a), goods the uses and other characteristics of which closely resemble those of the other goods.”

Like Goods and Classes of Goods

19. Cello submitted that domestically produced copper pipe fittings, defined in the same manner as the subject goods, are like goods in relation to the subject goods and that there is a single class of goods. In this regard, Cello referred to the Tribunal’s previous findings on the issues of like goods and classes of goods in cases concerning copper pipe fittings.¹⁵ The Tribunal sees no reason to depart from its previous approaches to these issues, especially given that no other submissions regarding like goods or classes of goods were made.

20. Accordingly, the Tribunal will conduct its analysis on the basis that domestically produced copper pipe fittings are “like goods” in relation to the subject goods and that there is a single class of goods.

Domestic Industry

21. In its decision to initiate dumping and subsidizing investigations, the CBSA identified Cello as the sole domestic producer of like goods.¹⁶

22. Where a domestic producer of like goods is related to an exporter or importer of dumped or subsidized goods, or is an importer of such goods, the Tribunal may consider whether to exclude that producer from the domestic industry for the purposes of its injury analysis.¹⁷ TRAV argued that Cello should be excluded from the “domestic industry” on the basis that it imported subject goods, and therefore that the proceedings should be terminated.¹⁸

23. In reply, Cello submitted that it should not be excluded from the definition of the domestic industry because its imports of the subject goods have been minimal and defensive in nature.

24. In assessing whether to exclude a domestic producer from the “domestic industry”, the Tribunal typically takes into account various structural and behavioural factors, and the objective of *SIMA* to protect producers in Canada from injury or threat of injury caused by imports of dumped or subsidized goods.¹⁹

15. *Copper Pipe Fittings* (RR-2015-003) at paras. 29-30; *Copper Pipe Fittings* (6 March 2007), NQ-2006-002 (CIIT) at paras. 52-59.

16. Exhibit PI-2017-003-05, Vol. 1B at 217.

17. *SIMA*, s. 2(1), s.v. “domestic industry”.

18. TRAV further submitted that Cello has not met the standing requirements under Article 11.4 of the WTO *SCM Agreement* to bring the present complaint. As the CBSA, and not the Tribunal, has the statutory authority to determine if the relevant standing requirements under subsection 31(2) of *SIMA* have been met, this is not an issue for the Tribunal to address. The Tribunal notes that the CBSA has stated that “[s]ince the complainant is the only known producer of certain [copper pipe fittings] in Canada, the CBSA is satisfied that the standing requirements pursuant to subsection 31(2) of *SIMA* have been met.” Exhibit PI-2017-003-05, Vol. 1B at 221.

19. *Photovoltaic Modules and Laminates* (3 July 2016), NQ-2014-003 (CIIT) at paras. 56, 59.

25. In the present case, the Tribunal does not consider it appropriate to exercise its discretion to exclude Cello from the domestic industry because doing so would negate that industry's existence.²⁰ Furthermore, the evidence concerning Cello's place in the market support its treatment as a domestic producer for the purposes of this preliminary injury inquiry. Cello's imports of subject goods were minor compared to its domestic production of like goods and domestic sales of like goods in terms of volumes (lbs).²¹ In terms of Cello's market behaviour, as the sole domestic producer of like goods, its imports of subject goods cannot be construed as an aggressive measure to capture market share from other domestic producers.

26. In light of the above, the Tribunal is satisfied that Cello represents domestic production as a whole and, therefore, constitutes the domestic industry.

Import Volume of Dumped and Subsidized Goods

27. For the purposes of its analysis, the Tribunal considered both Cello's estimates of import volumes and the import data compiled by the CBSA for the period from January 1, 2014, to June 30, 2017 (hereinafter the "period of inquiry" or POI).

28. Cello's estimates, which were based on Statistics Canada data, indicated that the volume of subject goods increased from 2014 to 2015, and again in 2016, followed by a decrease in the first half of 2017 as compared to the first half of 2016.²² However, the alleged increases in the absolute volume of imports of the subject goods were not supported by the CBSA's data.²³ The CBSA's estimate of imports, which is confidential, indicates that the volume of subject goods decreased from 2014 to 2015 and then increased in 2016, but remained well below the 2014 level.²⁴ The confidential customs data provided by TRAV also indicate an overall decrease in Vietnamese exports of the subject goods to Canada between 2014 and 2016.²⁵

29. Nevertheless, the estimates of import volumes from both Cello and the CBSA indicate that the volume of imports of the subject goods entering Canada increased relative to domestic production and consumption of like goods increased between 2014 and 2016.²⁶ According to both estimates, these relative import ratios decreased in the "interim" periods of 2017 as compared to the "interim" periods of 2016.²⁷ On the basis of the evidence on the confidential record, the Tribunal finds that the estimates provided by both

20. The Tribunal typically does not exclude producers from the domestic industry where doing so would negate that industry's existence. Indeed, in a previous injury inquiry concerning copper pipe fittings, the Tribunal decided not to exclude Cello from the domestic industry on the basis of its imports of subject goods since to do so would, in effect, deny that there was a domestic industry: *Copper Pipe Fittings* (18 October 1993), NQ-93-001 (CITT) at 14-15. See also *Certain Fasteners* (7 January 2005), NQ-2004-005 (CITT) at para. 83; *Chain Saws* (3 July 1987), CIT-2-87; *Bottoming Materials* (27 October 1982), ADT-7-82.

21. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 16, 33.

22. *Ibid.* at 33.

23. Exhibit PI-2017-003-05, Vol. 1B at 231.

24. Exhibit PI-2017-003-03.02 (protected), Vol. 2B at 15.

25. Exhibit PI-2017-003-07.01 (protected), Vol. 4 at 3. The discrepancies among the data sources may reflect the difficulties in ascertaining the volume of imports of the subject goods given that they are classified under at least seven Harmonized System (HS) codes that cover a wide range of non-subject goods. The Tribunal will be in a better position to assess import volumes in the context of a final injury inquiry through its own collection of data on subject goods imported into Canada during the period of inquiry.

26. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 33; Exhibit PI-2017-003-03.02 (protected), Vol. 2B at 11, 15.

27. For the 2016 and 2017 interim periods, Cello used a six-month period (January to June) whereas the CBSA used an eight-month period (January to August).

Cello and the CBSA indicate that a significant increase in the volume of subject goods relative to domestic production and consumption occurred from 2014 to 2016.

30. The CBSA's public data show that Vietnamese imports held a greater share of total imports of copper pipe fittings than any other exporting country from 2014 to 2016 (37.3 percent in 2014, 24.4 percent in 2015 and 31.4 percent in 2016). Imports of the subject goods were matched only by non-subject Chinese imports in the first eight months of 2017 (China at 26.3 percent and Vietnam at 26.2 percent). Imports of the subject goods relative to total imports declined from 2014 to 2016, with non-subject Chinese imports capturing Vietnam's share of imports relative to total imports (as well as the share of other non-subject countries).²⁸

31. In light of the above, the Tribunal finds that the evidence discloses a reasonable indication that there has been a significant increase in the volume of subject goods relative to domestic production and consumption.

Effect on the Price of Like Goods

32. As stated above, Cello alleged that subject goods undercut, depressed and suppressed prices of like goods. Having reviewed the evidence submitted by the complainant, the Tribunal finds it to be relevant, accurate and adequate to reasonably support those allegations for the purposes of this preliminary injury inquiry. Bearing in mind the lower standard applicable at this stage, this evidence reasonably indicates that the dumping and subsidizing of the subject goods have negatively affected the prices of the like goods throughout the POI, as explained below.

Price Undercutting

33. The complaint indicated that the prices of the subject goods severely undercut the prices of like goods in the Canadian market throughout the POI. According to Cello's own estimates using Statistics Canada data, average landed prices of imports from Vietnam were, with a few exceptions, the lowest-priced source compared to Cello's selling prices (\$/lb.) and imports from all other countries in each period of the POI.²⁹ The complaint further indicated that the "degree of undercutting by Vietnamese imports widened between 2014 and 2016 from \$2.48/lb to \$5.61/lb."³⁰

34. The Tribunal finds that Cello's estimates of average prices indicate a consistent trend of significant price undercutting from 2014 to the first half of 2017. The margin of price undercutting by the subject goods increased with every year of the period and then decreased in the first half of 2017 as compared to the first half of 2016.³¹

Price Depression

35. According to the information provided with the complaint, Cello's average selling prices of like goods declined in 2015 relative to 2014 and improved slightly in 2016. In the first half of 2017, Cello's average selling prices of like goods declined to their lowest level of the POI.³² The average landed prices of imports from Vietnam declined by 29 percent in 2015 and by a further 32 percent in 2016.³³ In the first half

28. Exhibit PI-2017-003-05, Vol. 1B at 222.

29. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 34.

30. Exhibit PI-2017-003-02.01, Vol. 1 at 39.

31. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 18, 34, 39.

32. *Ibid.* at 34.

33. Exhibit PI-2017-003-02.01, Vol. 1 at 39.

of 2017, the average landed prices of imports from Vietnam increased by 135 percent, yet they remained much lower than the prices of like goods in the same period.

36. The average pricing data reasonably indicate significant depression of the prices of like goods in the face of consistent downward pressure from the lower-priced subject goods.

37. To support its claim of price depression, Cello provided a statement of evidence from Mr. P. Howell, Vice-President of Sales, documenting a number of specific instances in which Cello lowered its prices in order to compete with the subject goods.³⁴ Some of those allegations related to key customer accounts where Cello had decreased its selling prices in an effort to maintain or increase sales volumes. The Tribunal finds this evidence of specific injury allegations to be sufficient for the purposes of the preliminary injury inquiry, bearing in mind that such evidence will need to be fully tested in the context of a final injury inquiry.

Price Suppression

38. The Tribunal is satisfied, having examined the changes in Cello's consolidated \$/lb. cost of goods sold (COGS) compared to the changes in the weighted average selling prices of the like goods, that the data reasonably indicate that Cello has been unable to increase its prices in step with increases in its COGS, with the exception of the first half of 2017.³⁵

Resultant Impact on the Domestic Industry

39. As part of its analysis under paragraph 37.1(1)(c) of the *Regulations*, the Tribunal must consider the impact of the dumped and subsidized goods on the state of the domestic industry and, in particular, all relevant economic factors and indices that have a bearing on the state of the domestic industry.

40. In a preliminary injury inquiry, the Tribunal must determine whether the evidence discloses a reasonable indication of a causal link between the dumping and subsidizing of the subject goods and the injury on the basis of the resultant impact of the volume and price effects of the dumped and subsidized goods on the domestic industry. The standard is whether there is a reasonable indication that the dumping and subsidizing of the subject goods have, *in and of themselves*,³⁶ caused injury. The Tribunal must further consider, pursuant to paragraph 37.1(3)(b) of the *Regulations*, whether the reasonable indication of injury is attributable to factors other than the dumping and subsidizing of the subject goods.

41. Cello submitted that the dumping and subsidizing of the subject goods had caused injury to it in the form of decreased domestic production and capacity utilization, loss of sales volumes and market share, loss of employment and declined financial performance.

42. Cello's domestic production of like goods decreased overall from 2014 to 2016, having first increased in 2015 over the previous year before a large decrease in 2016. Production increased in the first half of 2017 as compared to the first half of 2016. Cello's production capacity utilization rate followed a similar trend over the POI.³⁷

34. Exhibit PI-2017-003-03.01 (protected), Vol. 2A at 4.

35. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 18, 34, 39.

36. *Gypsum Board* at para. 44; *Copper Rod* (30 October 2006), PI-2006-002 (CITT) at paras. 40, 43; *Galvanized Steel Wire* at para. 75; *Circular Copper Tube* (22 July 2013), PI-2014-002 (CITT) at para. 82; *Polyethylene Terephthalate Resin* (17 October 2017), PI-2017-002 (CITT) at para. 41.

37. Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 37, 40.

43. Between 2014 and 2016, sales of domestic production decreased in both volume and value. These indicators increased minimally in the first half of 2017 compared to the first half of 2016.³⁸

44. Cello alleged that it lost market share from 2014 to 2016, due to the increasing presence of low-priced imports from Vietnam in the Canadian market and, further, that the apparent improvement in its market share in the first half of 2017 may only be due to the “timing of imports” and a lowering of its prices.³⁹

45. As previously indicated, however, the alleged increases in absolute import volumes of subject goods were not supported by the CBSA’s confidential import data, with the exception of between 2015 and 2016. Using the CBSA data to estimate the size of the Canadian market shows that the market share held by the subject goods decreased from 34.5 percent in 2014 to 22.8 percent in 2015, and then increased to 29.5 percent in 2016. In the first eight months of 2017, the subject goods accounted for 23.7 percent of the market, which represented a decrease from the same period in 2016. For its part, Cello experienced a minimal decrease in market share from 7.6 percent in 2014, to 6.6 percent in 2015 and 6.1 percent in 2016; its share then increased to 9.7 percent in the first half of 2017.⁴⁰

46. Although an estimate of the Canadian market using CBSA data shows only a minimal loss in market share for Cello, Mr. Howell’s statement of evidence provides documentation, such as sales reports and emails, in support of a causal link between Cello’s declining sales results and competition from the subject goods throughout the entire POI.⁴¹

47. The data indicate, however, that there may have also been other factors at play, such as an overall contraction in the apparent market in 2016.⁴² In addition, imports from non-subject countries appear to have gained market share during the POI, driven by Chinese imports. In 2014, total imports from non-subject countries accounted for 57.9 percent of the market, which increased to 70.7 percent in 2015, fell to 64.4 percent in 2016, and increased again to 66.6 percent in the first eight months of 2017. Nevertheless, the data indicate that the subject imports consistently held the largest market share of any single country source during each full year of the POI.⁴³

48. In the event of a full injury inquiry, the Tribunal will be in a position to undertake a more detailed consideration of these volumes, sales and market share indicators on the basis of the additional information to be gathered during such proceedings. This will also include a more fulsome assessment of the specific injury allegations relating to lost sales in competition with the subject goods.

49. In terms of employment, the evidence submitted by Cello indicates that the number of direct employees involved in domestic production of like goods fell significantly from 2014 to 2016, resulting in lower wages paid over the same period. Both direct employment and wages increased minimally in the first half of 2017 as compared to the first half of 2016.⁴⁴

50. Cello’s confidential financial results indicate that it experienced deteriorating financial performance on the sale of like goods in Canada during the POI, particularly in 2016.⁴⁵ Its gross margins decreased from

38. *Ibid.* at 38.

39. Exhibit PI-2017-003-02.01, Vol. 1 at 42.

40. Exhibit PI-2017-003-05 (protected), Vol. 1B at 222; Exhibit PI-2017-003-03.02 (protected), Vol. 2B at 65.

41. Exhibit PI-2017-003-03.01 (protected), Vol. 2A at 4.

42. Exhibit PI-2017-003-03.02 (protected), Vol. 2B at 16.

43. Exhibit PI-2017-003-05, Vol. 1B at 222.

44. Exhibit PI-2017-003-02.01, Vol. 1 at 44; Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 40.

45. Exhibit PI-2017-003-02.01, Vol. 1 at 43; Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 39.

2014 to 2016 and remained flat in the first half of 2017. Cello also experienced deepening net income losses since 2014. To support its allegation that those results were caused by the dumping and subsidizing of the subject goods, Cello contrasted them with its more positive financial performance on export sales of domestically produced like goods to the United States (despite an admitted decline in 2016).⁴⁶

51. Various factors other than the dumping and subsidizing of the subject goods may have had some impact on Cello, including changing market demand conditions, the vulnerability of its business to fluctuations in the global price of copper and USD/CAD exchange rates, and the availability in the Canadian market of alternative products such as PEX fittings and push and press fittings.⁴⁷ Cello submitted that the impact of such factors was minimal during the POI and did not have nearly the impact of the subject goods. For example, Cello indicated that, to a large extent it was able to manage fluctuations in copper prices and the exchange rate through timing its raw material purchases. While worthy of further investigation and analysis in the context of a final injury inquiry, at this stage there is sufficient evidence disclosing a reasonable indication that the price effects of the volumes of imports of the dumped and subsidized subject goods have, in and of themselves, caused material injury to the domestic industry, particularly in 2016.

52. As there is a reasonable indication that the dumping and subsidizing of the subject goods have caused injury, the Tribunal will exercise judicial economy and not consider whether there is a reasonable indication that the dumping and subsidizing of the subject goods are threatening to cause injury.

CONCLUSION

53. On the basis of the foregoing analysis, the Tribunal determines that the evidence discloses a reasonable indication that the dumping and subsidizing of the subject goods have caused injury to the domestic industry.

Serge Fréchette
Serge Fréchette
Presiding Member

Daniel Petit
Daniel Petit
Member

Rose Ritcey
Rose Ritcey
Member

46. Exhibit PI-2017-003-02.01, Vol. 1 at 43; Exhibit PI-2017-003-03.01 (protected), Vol. 2 at 39.

47. Exhibit PI-2017-003-02.01, Vol. 1 at 44-45.

APPENDIX 1

List of Goods Subject to the Investigations

The following information is to be taken into consideration in identifying copper pipe fittings (subject goods) being investigated by the Canada Border Services Agency (CBSA):

1. The subject goods are identified in terms of imperial measurement, i.e. inches. The CBSA is also investigating subject goods that encompass the metric equivalents of the imperial measurement. The term metric equivalent refers to those fittings that are soft converted equivalents of the imperial sized fittings and does not include fittings made specifically in metric dimensions.
2. The subject goods are identified either as a wrought product or as a cast product. Where a subject good contains an asterisk (“*”), the CBSA is investigating both the wrought product and the cast product.
3. The subject goods are identified in terms of nominal size. Plumbing and heating fittings are marked according to nominal sizes that correspond to the inside diameters, while fittings for air conditioning and refrigeration are based on actual outer diameter sizes. The CBSA is also investigating subject goods that are described in terms of their outside diameter size. To determine the nominal size of a fitting that is measured in terms of its outside diameter size, always subtract 1/8 inch from the outside diameter size.
4. The subject goods are identified using abbreviated terms provided by the complainant (Cello Products Inc.). The following is a list of the terms:

Abbreviation Chart			
C	Copper Tube Cupped End or Sweat End	LT	Long Turn
M	Male NPT Thread	MJ	Mechanical Joint
FE	Female NPT Thread	DWV	Drainage, Waste, Vent
SJ	Slip Joint End	TY	90° Drainage Tee
FTG	Fitting End (Street End)	Y	45° Drainage Tee

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
3 X 4 CLOSET FLANGE	*	1 X 5/8 CXC WROT COUPLING	*
4 X 4 CLOSET FLANGE	*	1 X 3/4 CXC WROT COUPLING	*
3 X 1-1/2 FITXC CAST DWV BUSH	*	1-1/4 CXC WROT P COUPLING	*
4 X 1-1/2 CXC CAST DWV CPLGS	*	1-1/4 X 1/2 CXC WROT COUPLINGS	*
4 X 3 CXC CAST DWV COUPLING	*	1-1/4 X 3/4 CXC WROT COUPLING	*
1-1/4 CXCXC 45 Y'S	*	1-1/4 X 1 CXC WROT COUPLING	*
1-1/2 CXCXC 45 DWV Y'S	*	3/8 X 1/8 FTGXC WROT BUSHING	*
1-1/2CX 1-1/4CX 1-1/4C 45 Y'S	*	3/8 X 1/4 FITXC WROT BUSHING	*
1-1/2CX 1-1/4CX 1-1/2C 45 Y'S	*	1/2 X 1/4 FITXC WROT BUSHING	*
1-1/2CX 1-1/2CX 1-1/4C 45 Y'S	*	1/2 X 3/8 FITXC WROT BUSHING	*
2 CXCXC 45 DWV Y'S	*	5/8 X 1/4 WROT P BUSHING	*
2CX 1-1/4CX 1-1/4C 45 Y'S	*	5/8 X 3/8 FITXC WROT BUSHING	*
2CX 1-1/4CX 1-1/2C 45 Y'S	*	5/8 X 1/2 FITXC WROT BUSHING	*
2CX 1-1/4CX 2C 45 Y'S	*	3/4 X 1/4 FITXC WROT BUSHING	*
2CX 1-1/2CX 1-1/4C 45 Y'S	*	3/4 X 3/8 FITXC WROT BUSHING	*
2CX 1-1/2CX 1-1/2C 45 Y'S	*	3/4 X 1/2 FITXC WROT BUSHING	*
2CX 1-1/2CX 2C 45 Y'S	*	3/4 X 5/8 FITXC WROT BUSHING	*
2CX 2CX 1-1/4C 45 Y'S	*	1 X 3/8 FITXC WROT BUSHING	*
2CX 2CX 1-1/2C 45 Y'S	*	1 X 1/2 FITXC WROT BUSHING	*
3 CXCXC 45 DWV Y'S	*	1 X 5/8 FITXC WROT BUSHING	*
3C X 2C X 2C DWV 45 Y'S	*	1 X 3/4 FITXC WROT BUSHING	*
3CX 3CX 1-1/4C 45 Y'S	*	1-1/4 X 1/2 FITXC WROT BUSHING	*
3CX 3CX 1-1/2C 45 Y'S	*	1-1/4 X 3/4 FITXC WROT BUSHING	*
3CX 3CX 2C 45 Y'S	*	1-1/4 X 1 FITXC WROT BUSHING	*
4 CXCXC 45 Y'S	*	1-1/2 X 1/2 FITXC WROT BUSHING	*
4CX 4CX 2C 45 Y'S	*	1-1/2 X 3/4 FITXC WROT BUSHING	*
4CX 4CX 3C 45 Y'S	*	1-1/2 X 1 FITXC WROT BUSHING	*
1-1/4 DWV TY'S	*	1-1/2 X 1-1/4 FITXC WROT P BUSH	*
1-1/2 DWV TY'S	*	2 X 1/2 FITXC WROT BUSHING	*
1-1/2 X 1-1/4 X 1-1/4 DWV TY'S	*	2 X 3/4 FITXC WROT BUSHING	*
1-1/2 X 1-1/4 X 1-1/2 DWV TY'S	*	2 X 1 FITXC WROT BUSHING	*
1-1/2 X 1-1/2 X 1-1/4 DWV TY'S	*	2 X 1-1/4 FITXC WROT P BUSHING	*
3 FTG X C X C DWV TY'S	*	2 X 1-1/2 FITXC WROT P BUSHING	*
3 X 3 X 1-1/4 FITXCXC DWV TY'S	*	1-1/2 CXC WROT P COUPLING	*
3 X 3 X 1-1/2 FITXCXC DWV TY	*	2-1/2 X 1 FITXC WROT BUSHING	*
3 X 3 X 2 FITXCXC DWV TYS	*	2-1/2 X 1-1/4 FITXC WROT BUSH	*
2 DWV TY'S	*	2-1/2 X 1-1/2 FITXC WROT BUSH	*
2 X 1-1/4 X 1-1/4 DWV TY'S	*	2-1/2 X 2 FITXC WROT BUSHING	*
2 X 1-1/4 X 1-1/2 DWV TY'S	*	1-1/2 X 1/2 CXC WROT COUPLING	*
2 X 1-1/4 X 2 DWV TY'S	*	1-1/2 X 3/4 CXC WROT COUPLING	*
2 X 1-1/2 X 1-1/4 DWV TY'S	*	1-1/2 X 1 CXC WROT COUPLING	*
2 X 1-1/2 X 1-1/2 DWV TY'S	*	1-1/2 X 1-1/4 CXC WROT P CPLG	*
2 X 1-1/2 X 2 DWV TY'S	*	3 X 1/2 FITXC WROT P BUSHING	*
2 X 2 X 1-1/4 DWV TY'S	*	3 X 3/4 FITXC WROT P BUSHING	*
2 X 2 X 1-1/2 DWV TY'S	*	3 X 1 FITXC WROT P BUSHING	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1-1/2 CXCXFE CAST DWV TY	*	3 X 1-1/4 FITXC WROT P BUSHING	*
2 CXCXFE CAST DWV TY		3 X 1-1/2 FITXC WROT P BUSHING	*
2 X 1-1/2 X 1-1/2 CCF DWV TYS		3 X 2 FITXC WROT P BUSHING	*
3 DWV TY'S	*	3 X 2-1/2 FITXC WROT BUSHING	*
3 X 1-1/2 X 1-1/4 DWV TY'S	*	3-1/2 X 2 FITXC WROT P BUSHING	*
3 X 2 X 1-1/2 CXCXC DWV TY'S	*	3-1/2 X 2-1/2 FITXC WROT BUSH	*
3 X 3 X 1-1/4 DWV TY'S	*	3-1/2 X 3 FITXC WROT BUSHING	*
3 X 3 X 1-1/2 DWV TY'S	*	4 X 1-1/4 FITXC WROT BUSHING	*
3 X 3 X 2 DWV TY'S	*	4 X 1-1/2 FITXC WROT BUSHING	*
4 DWV TY'S	*	4 X 2 FITXC WROT P BUSHING	*
4 X 4 X 1-1/2 DWV TY'S	*	4 X 2-1/2 FITXC WROT BUSHING	*
4 X 4 X 2 DWV TY'S	*	4 X 3 FITXC WROT P BUSHING	*
4 X 4 X 3 DWV TY'S	*	4 X 3-1/2 FITXC WROT BUSHING	*
1-1/4 CXFE CAST DWV ADAPTER	*	2 CXC WROT P COUPLING	*
1-1/2 FITXFE CAST DWV ADAPTER	*	2 X 1/2 CXC WROT COUPLING	*
1-1/2 CXFE CAST DWV ADAPTER	*	2 X 3/4 CXC WROT COUPLING	*
1-1/2 X 1-1/4 CXFE CAST ADAPT	*	2 X 1 CXC WROT COUPLING	*
3 FITXFE CAST DWV ADAPTER	*	2 X 1-1/4 CXC WROT P COUPLING	*
2 CXFE CAST DWV ADAPTER	*	2 X 1-1/2 CXC WROT P COUPLING	*
3 CXFE CAST DWV ADAPTER	*	2-1/2 CXC WROT P COUPLING	*
4 CXFE CAST DWV ADAPTER	*	2-1/2 X 3/4 CXC WROT COUPLING	*
1-1/4 CXM CAST DWV ADAPTER	*	2-1/2 X 1 CXC WROT P CPLGS	*
1-1/4X1-1/2 CXM CAST DWV ADAPT	*	2-1/2 X 1-1/4 CXC WROT CPLG	*
1-1/2 FTGXM CAST DWV ADAPTER	*	2-1/2 X 1-1/2 CXC WROT CPLG	*
1-1/2 CXM CAST DWV ADAPTER	*	2-1/2 X 2 CXC WROT COUPLING	*
1-1/2X1-1/4 CXM CAST DWV ADAPT	*	3 CXC WROT P COUPLING	*
2 CXM CAST DWV ADAPTER	*	3 X 3/4 CXC WROT P COUPLING	*
2 X 1-1/2 CXM CAST DWV ADAPT	*	3 X 1 CXC WROT P COUPLING	*
3 CXM CAST DWV ADAPTER	*	3 X 1-1/4 CXC WROT P COUPLING	*
4 CXM CAST DWV ADAPTER	*	3 X 1-1/2 CXC WROT P COUPLING	*
1-1/4 X 2 CXSP CAST FERRULES	*	3 X 2 CXC WROT P COUPLING	*
1-1/2 X 2 CXSP CAST FERRULES	*	3 X 2-1/2 CXC WROT P COUPLING	*
1-1/2 X 3 CXSP CAST FERRULE	*	3-1/2 CXC WROT P COUPLING	*
2 CXSP CAST FERRULES	*	3-1/2 X 3 CXC WROT COUPLING	*
2 X 3 CXSP CAST FERRULE	*	4 CXC WROT P COUPLING	*
2 X 4 CXSP CAST FERRULES	*	4 X 1-1/2 CXC WROT P COUPLING	*
3 CXSP CAST FERRULES	*	4 X 2 CXC WROT P COUPLING	*
3 X 4 CXSP CAST FERRULES	*	4 X 2-1/2 CXC WROT COUPLING	*
4 CXSP CAST FERRULES	*	4 X 3 CXC WROT P COUPLING	*
3 X 4 CXSP CAST ECC FERRULES	*	4 X 3-1/2 CXC WROT COUPLING	*
1-1/4 X 2 CXMJ CAST ADAPTER	*	5 CXC WROT PRESS COUPLING	*
1-1/4 X 3 CXMJ DWV ADAPTER	*	6 CXC WROT PRESS COUPLING	*
1-1/2 X 2 CXMJ CAST ADAPTER	*	6 X 2-1/2 WROT COUPLINGS	*
1-1/2 X 3 CXMJ CAST ADAPTER	*	1-1/4 X 3/4 CXC WROT ECC CPLG	*
1-1/2 X 4 CXMJ CAST ADAPTER	*	1-1/4 X 1 CXC WROT ECC CPLG	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
2 X 3 CXMJ CAST ADAPTER	*	1/8 CXC WROT CPLGS NO STOP	*
2 X 4 CXMJ CAST ADAPTER	*	1/4 CXC NSTOP WROT CPLGS	*
3 CXMJ CAST ADAPTER	*	3/8 CXC WROT CPLGS NO STOP	*
3 X 4 CXMJ CAST ADAPTER	*	1/2 CXC WROT CPLGS NO STOP	*
4 CXMJ CAST ADAPTER	*	5/8 CXC WROT CPLGS NO STOP	*
6 C X M J CAST DWV ADAPTER	*	3/4 CXC WROT CPLGS NO STOP	*
1-1/4 CXC 11-1/4 CAST ELBOW	*	1 CXC WROT CPLGS NO STOP	*
1-1/2 CXC 11-1/4 CAST ELBOW	*	1-1/4 CXC WROT CPLGS NO STOP	*
2 CXC 11-1/4 CAST ELBOW	*	1-1/2 CXC WROT CPLGS NO STOP	*
3 CXC 11-1/4 CAST ELBOW	*	2 CXC WROT CPLGS NO STOP	*
4 C X C 11-1/4 CAST ELBOW	*	2-1/2 CXC WROT CPLG NO STOP	*
1-1/4 CXC 22-1/2 CAST ELBOW	*	3 CXC WROT CPLGS NO STOP	*
1-1/2 CXC 22-1/2 CAST ELBOW	*	4 CXC WROT CPLGS NO STOP	*
2 CXC 22-1/2 CAST ELBOW	*	5 CXC WROT CPLGS NO STOP	*
3 CXC 22-1/2 CAST ELBOW	*	6 CXC WROT CPLGS NO STOP	*
4 CXC 22-1/2 CAST ELBOW	*	1/2 X 3 CXC REPAIR COUPLING	
3 FITXC 45 CAST DWV ELBOW	*	1/2 X 6 C X C REPAIR COUPLING	
4 FITXC 45 CAST DWV ELBOW	*	3/4 X 3 C X C REPAIR COUPLING	
2 CXM CAST DWV 45 ELBOW	*	1/8 CXC P RING COUPLING	*
1-1/4 CXC 45 CAST DWV ELBOW	*	1/4 CXC RING COUPLINGS	*
1-1/2 CXC 45 CAST DWV ELBOW	*	3/8 CXC P RING COUPLING	*
2 CXC 45 CAST DWV ELBOW	*	1/2 CXC RING COUPLINGS	*
3 CXC 45 CAST DWV ELBOW	*	5/8 CXC P RING COUPLING	*
4 CXC 45 CAST DWV ELBOW	*	3/4 CXC RING COUPLINGS	*
1-1/4 CXC 60 CAST ELBOW	*	1 CXC P RING COUPLING	*
1-1/2 CXC 60 CAST ELBOW	*	1-1/4 CXC P RING COUPLING	*
2 CXC 60 CAST ELBOW	*	1-1/2 CXC P RING COUPLING	*
3 CXC 60 CAST ELBOW	*	2 CXC P RING COUPLING	*
1-1/4 CXC 90 CAST DWV ELBOW	*	2-1/2 CXC RING COUPLINGS	*
1-1/4 FITXC 90 CAST DWV ELBOW	*	3 CXC P RING COUPLING	*
1-1/2 FITXC 90 CAST DWV ELBOW	*	4 CXC P RING COUPLING	*
2 FITXC 90 CAST DWV ELBOW	*	1/2 X 3-1/4 FTGXC SLIDE CPLG	
1-1/2 CXC 90 CAST DWV ELBOW	*	3/4 X 5 FTGXC SLIDE COUPLING	
1-1/2 X 1-1/4 CXC DWV 90 ELBOW	*	1/4 C X FE WROT ADAPTERS	*
3 CAST DWV FTGXC 90 ELBOW	*	3/8 C X FE WROT ADAPTERS	*
4 FITXC 90 CAST DWV ELBOW	*	3/8 X 1/4 CXFE WROT ADAPTERS	*
2 CXC 90 CAST DWV ELBOW	*	3/8 X 1/2 CXFE WROT ADAPTERS	*
2X 1-1/4 CXC 90 CAST DWV ELBOW	*	1/2 C X FE WROT ADAPTERS	*
2 X 1-1/2 CXC 90 CAST DWV ELB	*	1/2 X 1/4 CXFE WROT ADAPTER	*
1-1/2 CXFE 90 CAST DWV ELBOW	*	1/2 X 3/8 CXFE WROT ADAPTER	*
2 CXFE 90 CAST DWV ELBOW	*	1/2 X 3/4 CXFE WROT ADAPTER	*
1-1/2 CXM 90 CAST DWV ELBOW		1/2 X 1 CXFE WROT ADAPTER	*
2 CXM 90 CAST DWV ELBOW		5/8 X 1/2 CXFE WROT ADAPTER	*
3 CXC 90 CAST DWV ELBOW		5/8 X 3/4 CXFE WROT ADAPTER	*
4 CXC 90 CAST DWV ELBOW		3/4 C X FE WROT ADAPTERS	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1-1/2 TUBE END CLEANOUTS	*	3/4 X 1/2 CXFE WROT ADAPTER	*
3 TUBE END CLEANOUTS	*	3/4 X 1 CXFE WROT ADAPTER	*
3 FTG CLEANOUT - FLUSH TYPE	*	3/4 X 1-1/4 CXFE WROT ADAPTER	*
4 FTG CLEANOUT - FLUSH TYPE	*	3/4 X 1-1/2 CXFE WROT ADAPTER	*
1-1/4 FTG CLEANOUT - FULL PLUG	*	1 C X FE WROT ADAPTER	*
1-1/2 FTG CLEANOUT - FULL PLUG	*	1 X 1/2 CXFE WROT ADAPTER	*
2 FTG CLEANOUT - FULL PLUG	*	1 X 3/4 CXFE WROT ADAPTER	*
3 FTG CLEANOUT - FULL PLUG	*	1 X 1-1/4 CXFE WROT ADAPTER	*
4 FTG CLEANOUT - FULL PLUG	*	1 X 1-1/2 CXFE WROT ADAPTER	*
1-1/4 FITXSJ CAST ADAPTER	*	1-1/4 C X FE WROT ADAPTER	*
4 ACT(3S)X1-1/2C-30 ROOF ADAPT	*	1-1/4 C X 3/4 FEMALE WROT ADAP	*
4 ACT(3S) X 2C-30 ROOF ADAPTER	*	1-1/4 X 1 CXFE WROT ADAPTERS	*
4 SOIL(5A)X 1-1/2 C ROOF ADAPT	*	1-1/4 X 1-1/2 CXFE WROT ADAPTR	*
2 C X SJ DWV COUPLING	*	1-1/4 X 2 CXFE WROT PRESS ADAP	*
3/4 CXC CAST COUPLINGS	*	1/4 FITXFE WROT ADAPTER	*
1-1/4 CXC CAST P COUPLINGS	*	3/8 FITXFE WROT ADAPTER	*
1/2 CXCXFE CAST TEE		3/8 X 1/4 FTG X FE WROT ADAPT	*
1/2 X 1/2 X 1/4 CXCXFE C TEE		1/2 FITXFE WROT ADAPTER	*
1/2C X 1/2C X 3/8FE CAST TEE		1/2 X 1/4 FTGXFE WROT ADAPTER	*
1/2 X 1/2 X 3/4 CXCXF CAST TEE		1/2 X 3/8 FITT X FE ADAPTER	*
3/4 CXCXFE CAST TEE		1/2 FTG X 3/4 FE WROT ADAPTER	*
3/4C X 1/2C X 1/2FE CAST TEE		3/4 FITXFE WROT ADAPTER	*
3/4 X 1/2 X 3/4 CXCXF CAST TEE		3/4 FTG X 1/2 FEMALE WROT ADAP	*
3/4 X 3/4 X 3/8 CCFE CAST TEE		1 FITXFE WROT ADAPTER	*
3/4C X 3/4C X 1/2FE CAST TEE		1 FTG X 3/4 FEMALE WROT ADAPTE	*
3/4 X 3/4 X 1 CXCXFE CAST TEE		1-1/4 FITXFE WROT ADAPTER	*
1 CXCXFE CAST TEE		1-1/2 FITXFE WROT ADAPTER	*
1 X 1 X 1/2 CXCXFE CAST TEE		2 FITXFE WROT ADAPTERS	*
1 X 1 X 3/4 CXCXFE CAST TEE		1-1/2 C X FE WROT ADAPTER	*
1-1/4 CXCXFE CAST TEE		2-1/2 FITXFE WROT ADAPTER	*
1-1/4 X 1-1/4 X 1/2 CCFE TEE		1-1/2 C X 1 FEMALE ADAPTER	*
1-1/4 X 1-1/4 X 3/4 CCFE TEE		1-1/2 X 1-1/4 CXFE WROT ADAPT	*
1-1/4X1-1/4X1 CCFE TEE		1-1/2 X 2 CXFE WROT ADAPTER	*
1-1/2 CXCXFE CAST TEE		3 FITXFE WROT ADAPTER	*
1-1/2X1-1/2X1/2 CCFE TEE		3/4 CXC WROT UNION	*
1-1/2 X 1-1/2 X 3/4 CCFE TEE		1 CXC WROT UNION	*
1-1/2 X 1-1/2 X 1 CCFE TEE		2 C X FE WROT ADAPTER	*
1/2 CXFEXFE CAST TEE		1-1/4 CXC WROT UNION	*
1/2C X 3/4F X 1/2F CAST TEE		2 X 1 C X FE WROT ADAPTER	*
3/4 C X FE X FE CAST TEE		2 X 1-1/4 CXFE WROT ADAPTER	*
3/4 C X 3/4 FE X 1/2 FE TEE		2 X 1-1/2 CXFE WROT ADAPTER	*
2 CXCXFE CAST TEE		1-1/2 C X C WROT UNION	*
2 X 2 X 1/2 CXCXFE CAST TEE		1/2 C X FE WROT UNION	*
2 X 2 X 3/4 CXCXFE CAST TEE		3/4 C X FE WROT UNION	*
2 X 2 X 1 CXCXFE CAST TEE		1 C X FE WROT UNION	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
5 X 4 FITXC CAST BUSHING	*	2 CXC WROT UNIONS	*
6 X 2 FITXC CAST BUSHING	*	1-1/4 C X FE WROT UNION	*
6 X 3 FITXC CAST BUSHING	*	1-1/2 C X FE WROT UNION	*
6 X 4 FITXC CAST BUSHING	*	2 C X FE WROT UNION	*
6 X 5 FTGXC CAST P BUSHING	*	1/2 C X M WROT UNION	*
3/8 C X FE X C CAST TEE		3/4 C X M WROT UNIONS	*
1/2 CXFEXC CAST TEE		1 C X M WROT UNION	*
1/2C X 1/2FE X 3/4C CAST TEE		1-1/4 C X M WROT UNION	*
1/2C X 3/4FE X 1/2C CAST TEE		1-1/2 C X M WROT UNION	*
3/4 CXFEXC CAST TEE		2 C X M WROT UNION	*
3/4 X 1/2 X 1/2 CXFEXC TEE		2-1/2 C X FE WROT ADAPTER	*
3/4C X 1/2FE X 3/4C CAST TEE		3 C X FE WROT ADAPTERS	*
3/4C X 3/4FE X 1/2C CAST TEE		1/2 CXC WROT CROSSOVER CPLG	*
1 CXFEXC CAST TEE		3/4 CXC WROT CROSSOVER CPLG	*
1C X 1/2F X 1C CAST TEE		1/4 CXM WROT ADAPTER	*
1 X 3/4 X 1 CXFXC CAST TEE		1/4 X 3/8 CXM WROT ADAPT	*
1-1/4 CXFEXC CAST TEE		1/4 X 1/2 CXM WROT ADAPTER	*
1-1/4 X 1/2 X 1-1/4 CXFEXC TEE		3/8 CXM WROT ADAPTER	*
1-1/4 X 3/4 X 1-1/4 CXFEXC TEE		3/8 X 1/4 CXM WROT ADAPTER	*
1-1/2 C X FE X C CAST TEE		3/8 X 1/2 CXM WROT ADAPTER	*
1-1/2X1/2X1-1/2 CXFXC CAST TEE		1/2 CXM WROT ADAPTER	*
1-1/2X3/4X1-1/2 CXFEXC TEE		1/2 X 1/4 CXM WROT ADAPTER	*
1/2 FEXFEXC CAST TEE		1/2 X 3/8 CXM WROT ADAPTER	*
3/4 FEXFEXC CAST TEE		1/2 X 3/4 CXM WROT ADAPTER	*
3/4FE X 1/2FE X 1/2C CAST TEE		1/2 X 1 CXM WROT ADAPTER	*
3/4FE X 1/2FE X 3/4C CAST TEE		5/8 X 1/2 CXM WROT ADAPTER	*
3/4FE X 3/4FE X 1/2C CAST TEE		5/8 X 3/4 CXM WROT ADAPTER	*
2 C X FE X C CAST TEE		3/4 CXM WROT ADAPTER	*
2 X 1/2 X 2 CXFEXC TEE		3/4 C X 3/8 WROT MALE ADAPTER	*
2 X 3/4 X 2 CXFXC CAST TEE		3/4 X 1/2 CXM WROT ADAPTER	*
4 CXC CAST P COUPLINGS	*	3/4 X 1 CXM WROT ADAPTER	*
5 X 3 CXC CAST COUPLING	*	3/4 X 1-1/4 CXM WROT ADAPTER	*
5 X 4 CXC CAST COUPLING	*	3/4 X 1-1/2 CXM WROT ADAPTER	*
6 X 2 CXC CAST PRESS COUPLING	*	1 CXM WROT ADAPTER	*
6 X 3 CXC CAST P COUPLINGS	*	1 X 1/2 CXM WROT ADAPTER	*
6 X 4 CXC CAST P COUPLINGS	*	1 X 3/4 CXM WROT ADAPTER	*
6 X 5 CXC CAST COUPLING	*	1 X 1-1/4 CXM WROT ADAPTER	*
3/4 X 1/2 CXC CAST ECC COUPL	*	1 X 1-1/2 CXM WROT ADAPTER	*
1 X 1/2 CAST ECC COUPLING	*	1 X 2 CXMALE PRESSURE ADAPTER	*
1 X 3/4 CXC CAST ECC COUPLING	*	1-1/4 CXM WROT ADAPTER	*
1-1/4 X 1/2 CAST ECC COUPLING	*	1-1/4 X 3/4 CXM WROT ADAPTER	*
1-1/2 X 1 CXC CAST ECC COUPLIN	*	1-1/4 X 1 CXM WROT ADAPTER	*
1-1/2 X 1-1/4 CXC ECC CPLGS	*	1-1/4 X 1-1/2 CXM WROT ADAPT	*
2 X 1-1/4 CXC CAST ECC CPLGS	*	1-1/4 X 2 CXMALE PRESSURE ADAP	*
2 X 1-1/2 CXC CAST ECC CPLGS	*	1/4 FITXM WROT ADAPTER	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
3 X 2 CXFE CAST ECC COUPLING	*	3/8 FITXM WROT ADAPTERS	*
1/2 CXFE CAST ADAPTER	*	1/2 FITXM WROT ADAPTER	*
1/2 X 3/8 CXFE CAST ADAPTER	*	1/2 X 3/8 FITXM WROT ADAPTER	*
1/2 X 3/4 CXFE CAST ADAPTER	*	1/2 X 3/4 FITXM WROT ADAPTER	*
3/4 CXFE CAST ADAPTER	*	3/4 FITXM WROT ADAPTER	*
3/4 X 1/2 CXFE CAST ADAPTER	*	3/4 X 1/2 FITXM WROT ADAPTER	*
3/4 X 1 CXFE CAST ADAPTER	*	1 FITXM WROT ADAPTER	*
3/4 X 1-1/4 CXFE CAST ADAPTER	*	1 X 3/4 FITXM WROT ADAPTER	*
3/4 X 1-1/2 CXFE CAST ADAPTER	*	1-1/4 FITXM WROT ADAPTER	*
1 C X FE CAST ADAPTER	*	1-1/2 FITXM WROT ADAPTER	*
1 X 1/2 CXFE CAST ADAPTER	*	2 FITXM WROT ADAPTER	*
1 X 3/4 C X FE CAST ADAPTER	*	1-1/2 CXM WROT ADAPTER	*
1 X 1-1/4 CXFE CAST ADAPTER	*	2-1/2 FITXM WROT ADAPTER	*
1-1/4 CXFE CAST P ADAPTER	*	1-1/2 X 1 CXM WROT ADAPTER	*
1-1/4 X 1/2 CXFE CAST ADAPTERS	*	1-1/2 X 1-1/4 CXM WROT ADAPT	*
1-1/4 X 3/4 CXFE CAST ADAPTER	*	1-1/2 X 2 CXM WROT ADAPTER	*
1-1/4 X 1 CXFE CAST P ADAPTER	*	3 FTG X M WROT ADAPTER	*
3/4 X 1/2 FITXFE CAST ADAPTER	*	2 CXM WROT ADAPTER	*
1 FTGXFE CAST ADAPTER	*	2 X 1-1/4 CXM WROT ADAPTER	*
1-1/2 CXFE CAST P ADAPTER	*	2 X 1-1/2 CXM WROT ADAPTER	*
1-1/2 X 3/4 CXFE CAST P ADAPT	*	2 X 2-1/2 C X M WROT ADAPTER	*
1-1/2 X 1 CXFE CAST ADAPTER	*	2-1/2 CXM WROT ADAPTER	*
1-1/2 X 2 CXFE CAST ADAPTER	*	2-1/2 X 2 CXM WROT ADAPTER	*
2 CXFE CAST P ADAPTER	*	3 CXM WROT ADAPTER	*
2-1/2 CXFE CAST UNION	*	4 CXM WROT ADAPTER	*
2-1/2 CXC CAST UNION	*	1/2 X 3/4 C X HOSE ADAPTER	*
2 CXM CAST UNION	*	1/4 CXC WROT 45 ELBOW	*
2-1/2 C X M CAST UNION	*	3/8 CXC WROT 45 ELBOW	*
3 CXC CAST UNION	*	1/2 CXC WROT 45 ELBOW	*
2-1/2 C X FE CAST ADAPTER	*	5/8 CXC WROT P 45 ELBOW	*
3 CXFE CAST P ADAPTER	*	3/4 CXC WROT 45 ELBOW	*
1/2 CXCXCXC CAST CROSSES	*	1 CXC WROT 45 ELBOW	*
3/4 CXCXCXC CAST CROSSES	*	1-1/4 CXC WROT P 45 ELBOW	*
1 CXCXCXC CAST CROSSES	*	1/4 FTG X C WROT 45 ELBOW	*
1-1/2 CXCXCXC CAST CROSSES	*	3/8 FITXC WROT 45 ELBOW	*
2 CXCXCXC CAST CROSS	*	1/2 FITXC WROT 45 ELBOW	*
3/4 CXC CAST CROSSOVER CPLG	*	5/8 FITXC WROT 45 ELBOW	*
1/2 CXM CAST ADAPTER	*	3/4 FITXC WROT 45 ELBOW	*
1/2 X 3/4 CXM CAST ADAPTER	*	1 FITXC WROT 45 ELBOW	*
1/2 CAST COMP FLANGE - 125#		1-1/4 FITXC WROT P 45 ELBOW	*
3/4 CAST COMP FLANGE - 125#		1-1/2 FITXC WROT P 45 ELBOW	*
1 CAST COMP FLANGE - 125#		2 FITXC WROT P 45 ELBOW	*
1-1/4 CAST COMP FLANGE - 125#		1-1/2 CXC WROT P 45 ELBOW	*
1-1/2 CAST COMP FLANGE - 125#		2-1/2 FITXC WROT 45 ELBOW	*
2 CAST COMP FLANGE - 125#		2 CXC WROT P 45 ELBOW	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
2-1/2 CAST COMP FLANGE - 125#		2-1/2 CXC WROT P 45 ELBOW	*
3 CAST COMP FLANGE - 125#		3 CXC WROT P 45 ELBOW	*
3-1/2 COMP FLANGE #125		4 CXC WROT P 45 ELBOW	*
4 CAST COMP FLANGE - 125#		1/4 CXC WROT 90 ELBOW	*
5 CAST COMP FLANGE - 125#		3/8 CXC WROT 90 ELBOW	*
6 CAST COMP FLANGE - 125#		1/2 CXC WROT 90 ELBOW	*
8 CAST COMP FLANGE - 125#		5/8 CXC WROT 90 ELBOWS	*
1/2 CAST COMP FLANGE - 150#		3/4 CXC WROT 90 ELBOW	*
3/4 CAST COMP FLANGE - 150#		3/4 X 1/2 CXC WROT 90 ELBOW	*
1 CAST COMP FLANGE - 150#		1 CXC WROT 90 ELBOW	*
1-1/4 CAST COMP FLANGE - 150#		1 X 1/2 CXC WROT 90 ELBOW	*
1-1/2 CAST COMP FLANGE - 150#		1 X 3/4 CXC WROT 90 ELBOW	*
2 CAST COMP FLANGE - 150#		1-1/4 CXC WROT P 90 ELBOW	*
2-1/2 CAST COMP FLANGE - 150#		1-1/4 X 1 CXC WROT 90 ELBOW	*
3 CAST COMP FLANGE - 150#		1/4 FITXC WROT 90 ELBOW	*
3-1/2 CAST COMP FLANGE #150		3/8 FITXC WROT 90 ELBOW	*
4 X 9 CAST COMP FLANGE - 150#		1/2 FITXC WROT 90 ELBOW	*
5 CAST COMP FLANGE - 150#		5/8 FITXC WROT 90 ELBOW	*
6 CAST COMP FLANGE -150#		3/4 FITXC WROT 90 ELBOW	*
8 CAST COMP FLANGE - 150#		1 FITXC WROT 90 ELBOW	*
3/4 CXM CAST ADAPTER	*	1-1/4 FITXC WROT 90 ELBOW	*
3/4 X 1/2 CXM CAST ADAPTER	*	1/2 FTGXFTG WROT 90 ELBOW	*
3/4 X 1-1/4 CXM CAST ADAPTER	*	3/4 FTG X FTG WROT 90 ELBOWS	*
1/2 COMP FLANGES - 300#		1-1/2 FITXC WROT 90 ELBOW	*
1 X 5 COMP FLANGES - 300#		2 FITXC WROT 90 ELBOW	*
1-1/4 COMP FLANGES - 300#		1-1/2 CXC WROT P 90 ELBOW	*
1-1/2 X 6-1/2 COMP FLANGE-300#		2-1/2 FITXC WROT 90 ELBOW	*
2 COMP FLANGE - 300#		1-1/2CX 1-1/4C WROT P 90 ELBOW	*
2-1/2 CAST COMP FLANGE - 300#		2 CXC WROT P 90 ELBOW	*
3 X 8-1/4 COMP FLANGE - 300#		2-1/2 CXC WROT 90 ELBOW	*
4 COMP FLANGE - 300#		3 CXC WROT P 90 ELBOW	*
1 CXM CAST ADAPTER	*	4 CXC WROT P 90 ELBOW	*
1 X 1/2 CXM CAST ADAPTER	*	1/2 CXC WROT 90 VENT ELBOW	*
1 X 1-1/4 CXM CAST ADAPTER	*	3/4 CXC WROT 90 VENT ELBOW	*
1 X 1-1/2 CXM CAST ADAPTER	*	1 CXC WROT 90 VENT ELBOW	*
1-1/2 BLIND COMPANION FLANGE		1/4 CXC (LT) WROT 90 ELBOWS	
2 X 6 BLIND COMPANION FLANGE		3/8 CXC (LT) WROT 90 ELBOW	
3 X 7-1/2 BLIND COMP FLANGE		1/2 CXC (LT) WROT 90 ELBOW	
13-1/2 X 8 BLIND COMPANION FLG		5/8 CXC LT 90 ELBOW	
8 COMP FLANGE 125# SILVER BRZD		3/4 CXC (LT) WROT 90 ELBOW	
3 COMP FLANGE 150# SILVER BRZD		1 CXC (LT) WROT 90 ELBOW	
8 COMP FLANGE 150# SILVER BRZD		1-1/4 CXC (LT) WROT 90 ELBOW	
1-1/4 CXM CAST P ADAPTER	*	1/4 CXFIT LT 90 ELBOW	
1-1/4 X 1/2 CXM CAST ADAPTER	*	3/8 C X FTG LT 90 ELBOWS	
1-1/4 X 1 CXM CAST ADAPT	*	1/2 C X FTG LT 90 ELBOWS	

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1-1/2 CXM CAST P ADAPTER	*	5/8 CXFTG LT 90 ELBOW	
1-1/2 X 3/4 CXM CAST ADAPTER	*	3/4 CXFTG LT 90 ELBOW	
2 CXM CAST P ADAPTER	*	1 CXFTG LT 90 ELBOW	
2 X 1-1/2 C X M CAST P ADAPT	*	1-1/4 CXFTG LT 90 ELBOW	
2-1/2 CXM CAST ADAPTER	*	1-1/2 CXFTG LT 90 ELBOW	
3 CXM CAST P ADAPTER	*	2 CXFTG LT 90 ELBOW	
1/2C X 1M X 1/2 FE BOILER CPLG		1-1/2 CXC (LT) WROT 90 ELBOWS	
4 CXM CAST ADAPTER	*	2 CXC (LT) WROT 90 ELBOW	
1/2 X 1 X 1/2 CXMXFE CAST BOIL		3/4 X 1/8 FE X 3/4 W BASE TEE	*
1/2 C X M CAST 45 ELBOWS		1/2 X 1/4 FTGXC FL BUSHING	*
3/4 C X M CAST 45 ELBOWS		1/2 X 3/8 FITXC FLUSH BUSHING	*
1-1/4 C X M CAST 45 ELBOWS		5/8 X 3/8 FTGXC FL BUSHING	*
4 CXC CAST 45 ELBOW		3/4 X 1/2 FITXC FLUSH BUSHING	*
6 CXC CAST P 45 ELBOW		1 X 1/2 FITXC FL BUSHING	*
1/2 C X C 90 ELBOW CAST		1 X 3/4 FITXC FLUSH BUSHING	*
1-1/4 CXC CAST P 90 ELBOW		1-1/4X3/4 FITXC W FL BUSHING	*
1-1/4 X 1/2 CXC CAST 90 ELBOW		1-1/4 X 1 FITXC FLUSH BUSHING	*
1-1/4 X 3/4 CAST 90 ELBOWS		1-1/2 X 1 FTGXC FL BUSHING	*
1-1/4 X 1 CAST 90 ELBOWS		1-1/2 X 1-1/4 FL BUSH FITXC	*
1-1/2 X 1/2 CAST 90 ELBOWS		2 X 1-1/2 FITXC FLUSH BUSHING	*
1-1/2 X 3/4 CXC 90 CAST ELBOW		1 X 1/2 FLUSH FEMALE BUSHING	*
1-1/2 X 1 CXC 90 CAST ELBOW		1-1/4 X 3/4 FLUSH FEMALE BUSHI	*
1/2 CXFE CAST 90 ELBOW		1-1/4 X 1 FITXFE FLUSH FE BUSH	*
1/2 X 3/4 CXFE CAST 90 ELBOW		1-1/2 X 1 FTGXFE FLUSH FE BUSH	*
1/2 X 1 CXFE CAST 90 ELBOW		1/2 CXM FLUSH VALVE WROT ADAPT	*
3/4 CXFE CAST 90 ELBOW		3/4 CXM FLUSH VALVE WROT ADAPT	*
3/4 X 1/2 CXFE CAST 90 ELBOW		1/8 CXCXC WROT TEE	*
3/4 X 1 CXFE CAST 90 ELBOW		1/4 CXCXC WROT TEE	*
1 CXFE CAST 90 ELBOW		3/8 CXCXC WROT TEE	*
1 X 1/2 C X FE 90 ELL CAST		1/2 CXCXC WROT TEE	*
1 X 3/4 CXFE CAST 90 ELBOW		1/2 X 1/2 X 3/4 CXCXC WROT TEE	*
1-1/4 CXFE CAST P 90 ELBOW		3/4 CXCXC WROT TEE	*
1-1/4 X 3/4 CXFE CAST 90 ELBOW		3/4 X 1/2 X 1/2 CXCXC WROT TEE	*
1-1/4 X 1 CXFE CAST 90 ELBOW		3/4 X 1/2 X 3/4 CXCXC WROT TEE	*
1-1/2 CXFE CAST P 90 ELBOW		3/4 X 3/4 X 1/4 WROT P TEE	*
1-1/2 X 1 C X FE CP 90 ELBOWS		3/4C X 3/4C X 3/8C WROT P TEE	*
2 CXFE CAST P 90 ELBOW		3/4 X 3/4 X 1/2 CXCXC WROT TEE	*
3 C X FE CAST 90 ELBOW		1 CXCXC WROT TEE	*
1/2 CXM CAST 90 ELBOW		1 X 1/2 X 1/2 CXCXC WROT TEE	*
1/2 X 3/8 CXM CAST 90 ELBOW		1 X 1/2 X 3/4 CXCXC WROT TEE	*
1/2 X 3/4 CXM CAST 90 ELBOW		1 X 1/2 X 1 CXCXC WROT TEE	*
3/4 CXM CAST 90 ELBOW		1 X 3/4 X 1/2 CXCXC WROT TEE	*
3/4 X 1/2 CXM CAST 90 ELBOW		1 X 3/4 X 3/4 CXCXC WROT TEE	*
3/4 C X 1 M 90 CAST ELBOWS		1 X 3/4 X 1 CXCXC WROT TEE	*
1 CXM CAST 90 ELBOWS		1 X 1 X 3/8 CXCXC WROT TEE	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1 X 3/4 CXM CAST 90 ELBOW		1 X 1 X 1/2 CXCXC WROT TEE	*
1-1/4 CXM CAST P 90 ELBOW		1 X 1 X 3/4 CXCXC WROT TEE	*
1-1/4 X 1 CXM CAST 90 ELBOWS		1-1/4 CXCXC WROT TEE	*
1-1/2 CXM CAST P 90 ELBOW		1-1/4 X 1/2 X 1/2 WROT TEE	*
2 CXM CAST 90 ELBOW		1-1/4 X 1/2 X 3/4 WROT TEE	*
6 CXC CAST 90 ELBOW		1-1/4 X 1/2 X 1 WROT TEE	*
1/2C X 1/8FE X 1/2C BASE TEE	*	1-1/4 X 1/2 X 1-1/4 WROT TEE	*
1/2C X 1/8FE X 3/4C BASE TEE	*	1-1/4 X 3/4 X 1/2 WROT TEE	*
3/4C X 1/8FE X 3/4C BASE TEE	*	1-1/4 X 3/4 X 3/4 WROT TEE	*
1C X 1/8FE X 1 C BASE TEE	*	1-1/4 X 3/4 X 1 WROT TEE	*
1-1/4C X 1/8FEX1-1/4C BASE TEE	*	1-1/4 X 3/4 X 1-1/4 WROT TEE	*
1 X 1/2 FITXFE FL BUSHING	*	1-1/4 X 1 X 1/2 WROT TEE	*
1-1/4 X 1 FITXFE FLUSH ADAPTER	*	1-1/4 X 1 X 3/4 WROT TEE	*
1 1/2 FITT X 1 FE C FLUSH BUSH	*	1-1/4 X 1 X 1 WROT TEE	*
3/4 CXFTGXC CAST TEE	*	1-1/4 X 1 X 1-1/4 WROT TEE	*
2 X 2 X 3 CXCXC CAST TEE	*	1-1/4 X 1-1/4 X 1/2 WROT TEE	*
2-1/2 X 1/2 X 2-1/2 CAST TEE	*	1-1/4 X 1-1/4 X 3/4 WROT TEE	*
2-1/2 X 1-1/2 X 1-1/2 CAST TEE	*	1-1/4C X 1-1/4C X 1C WROT TEE	*
5 CXCXC CAST TEE	*	1-1/2 CXCXC WROT TEE	*
5 X 5 X 3 CXCXC CAST TEE	*	1-1/2 X 1/2 X 1/2 WROT TEE	*
6 CXCXC CAST TEE	*	1-1/2 X 1/2 X 3/4 WROT TEE	*
1-1/4 CXC WROT DWV COUPLING	*	1-1/2 X 1/2 X 1 CXCXC WROT TEE	*
1-1/2X1-1/4 FITXC W DWV BUSH	*	1-1/2 X 1/2 X 1-1/4 WROT TEES	*
2 X 1-1/4 FITXC WROT DWV BUSH	*	1-1/2 X 1/2 X 1-1/2 WROT TEE	*
2 X 1-1/2 FITXC W DWV BUSH	*	1-1/2 X 3/4 X 1/2 WROT TEE	*
1-1/2 CXC WROT DWV COUPLING	*	1-1/2 X 3/4 X 3/4 WROT TEE	*
1-1/2X 1-1/4 CXC WROT DWV CPLG	*	1-1/2 X 3/4 X 1 WROT TEE	*
3 X 1-1/4 FITXC WROT DWV BUSH	*	1-1/2 X 3/4 X 1-1/4 WROT TEE	*
3 X 1-1/2 FITXC WROT DWV BUSH	*	1-1/2 X 3/4 X 1-1/2 WROT TEE	*
3 X 2 FITXC WROT DWV BUSH	*	1-1/2 X 1 X 1/2 WROT TEE	*
4 X 2 FTGXC DWV BUSHINGS	*	1-1/2 X 1 X 3/4 WROT TEE	*
4 X 3 FTGXC WROT DWV BUSHING	*	1-1/2 X 1 X 1 WROT TEE	*
2 CXC WROT DWV COUPLING	*	1-1/2 X 1 X 1-1/4 WROT TEE	*
2 X 1-1/4 CXC WROT DWV CPLG	*	1-1/2 X 1 X 1-1/2 WROT TEE	*
2 X 1-1/2 CXC WROT DWV CPLG	*	1-1/2 X 1-1/4 X 1/2 WROT TEE	*
3 CXC WROT DWV COUPLING	*	1-1/2 X 1-1/4 X 3/4 WROT TEE	*
3 X 1-1/4 CXC WROT DWV CPLG	*	1-1/2 X 1-1/4 X 1 WROT TEE	*
3 X 1-1/2 CXC WROT DWV CPLG	*	1-1/2 X 1-1/4 X 1-1/4 WROT TEE	*
3 X 2 CXC WROT DWV COUPLING	*	1-1/2 X 1-1/4 X 1-1/2 WROT TEE	*
4 CXC WROT DWV COUPLING	*	1-1/2 X 1-1/2 X 1/2 WROT TEE	*
4 X 1-1/2 CXC WROT DWV CPLGS	*	1-1/2 X 1-1/2 X 3/4 WROT TEE	*
4 X 2 CXC WROT DWV COUPLING	*	1-1/2 X 1-1/2 X 1 WROT TEE	*
4 X 3 CXC WROT DWV COUPLING	*	1-1/2 X 1-1/2 X 1-1/4 WROT TEE	*
6 CXC WROT DWV COUPLING	*	2 CXCXC WROT TEE	*
1-1/4 CXC W DWV CPLGS NO STOP	*	2 X 1/2 X 2 WROT TEE	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1-1/2 CXC W DWV CPLGS NO STOP	*	2 X 3/4 X 2 WROT TEE	*
2 CXC WROT DWV CPLGS NO STOP	*	2 X 1 X 3/4 WROT TEE	*
3 CXC WROT DWV CPLGS NO STOP	*	2 X 1 X 1 WROT TEE	*
4 CXC WROT DWV CPLGS NO STOP	*	2C X 1C X 1-1/4C WROT TEE	*
1-1/4 CXM WROT DWV TRAP BUSHIN	*	2 X 1 X 1-1/2 WROT PRESS TEE	*
1-1/2 CXM WROT DWV TRAP BUSH	*	2 X 1 X 2 WROT TEE	*
2 CXM WROT DWV TRAP BUSHING	*	2 X 1-1/4 X 1/2 WROT TEE	*
1-1/4 CXFE WROT DWV ADAPTER	*	2 X 1-1/4 X 3/4 WROT TEE	*
1-1/4 X 1-1/2 CXFE WRT DWV ADA	*	2 X 1-1/4 X 1 WROT TEE	*
1-1/4 FTGXFEMALE DWV ADAPTER	*	2 X 1-1/4 X 1-1/4 WROT TEE	*
1-1/2 FTGXFE WROT DWV ADAPTER	*	2 X 1-1/4 X 1-1/2 WROT TEE	*
2 FTGXFEMALE DWV ADAPTER	*	2 X 1-1/4 X 2 WROT TEE	*
1-1/2 CXFE WROT DWV ADAPTER	*	2 X 1-1/2 X 1/2 WROT TEE	*
1-1/2 X 1-1/4 CXFE WROT ADAPT	*	2 X 1-1/2 X 3/4 WROT TEE	*
1-1/2 X 2 CXFE WROT DWV ADAPTE	*	2 X 1-1/2 X 1 WROT TEE	*
3 FITXFE WROT DWV ADAPTER	*	2 X 1-1/2 X 1-1/4 WROT TEE	*
2 C X FE WROT DWV ADAPTER	*	2 X 1-1/2 X 1-1/2 WROT TEE	*
2 X 1-1/2 CXFE WROT DWV ADAPT	*	2 X 1-1/2 X 2 WROT TEE	*
3 C X FE DWV ADAPTER	*	2 X 2 X 1/2 WROT TEE	*
1-1/2 MALE X 1-1/2 OD DWV ADAP	*	2 X 2 X 3/4 WROT TEE	*
1-1/4 CXM WROT DWV ADAPTER	*	2 X 2 X 1 WROT TEE	*
1-1/4X1-1/2 CXM WROT DWV ADAPT	*	2 X 2 X 1-1/4 WROT TEE	*
1-1/2 FTGXM WROT DWV ADAPTER	*	2 X 2 X 1-1/2 WROT TEE	*
2 FTGXM WROT DWV ADAPTER	*	2-1/2 CXCXC WROT TEE	*
1-1/2 CXM WROT DWV ADAPTER	*	2-1/2 X 1/2 X 2-1/2 WROT TEE	*
1-1/2 X 1-1/4 CXM DWV WROT ADA	*	2-1/2 X 3/4 X 1-1/2 WROT TEE	*
1-1/2 X 2 CXM WROT DWV ADAPTER	*	2-1/2 X 3/4 X 2-1/2 WROT TEE	*
2 CXM WROT DWV ADAPTER	*	2-1/2 X 1 X 1-1/4 WROT TEE	*
2 X 1-1/2 CXM WROT DWV ADAPTER	*	2-1/2 X 1 X 1-1/2 WROT TEE	*
3 CXM WROT DWV ADAPTER	*	2-1/2 X 1 X 2 WROT TEE	*
4 CXM WROT DWV ADPTER	*	2-1/2 X 1 X 2-1/2 WROT TEE	*
1-1/4 CXM DWV FL TRAP ADAPTER	*	2-1/2 X 1-1/4 X 1-1/4CXCXC TEE	*
1-1/2 CXM DWV FL TRAP ADAPTER	*	2-1/2 X 1-1/4 X 1-1/2 WROT TEE	*
2 CXM DWV FL TRAP ADAPTER	*	2-1/2 X 1-1/4 X 2 WROT TEE	*
1-1/2 CXMALE DWV SCULLY BUSHIN	*	2-1/2 X 1-1/4 X 2-1/2 WROT TEE	*
2 CXMALE DWV SCULLY BUSHING	*	2-1/2 X 1-1/2 X 1 WROT TEE	*
2 C X MJ WROT DWV ADAPTER	*	2-1/2 X 1-1/2 X 1-1/4 WROT TEE	*
1-1/4 WROT DWV CXFTG 45 ELBOW	*	2-1/2 X 1-1/2 X 1-1/2 WROT TEE	*
1-1/2 FTGXC WROT DWV 45 ELBOW	*	2-1/2 X 1-1/2 X 2 WROT TEE	*
2 FTGXC WROT DWV 45 ELBOW	*	2-1/2 X 1-1/2 X 2-1/2 WROT TEE	*
3 C X FTG WROT DWV 45 ELBOW	*	2-1/2 X 2 X 1/2 WROT TEE	*
1-1/4 CXC 45 WROT DWV ELBOW	*	2-1/2 X 2 X 3/4 WROT TEE	*
1-1/2 CXC 45 WROT DWV ELBOW	*	2-1/2 X 2 X 1 WROT TEE	*
2 CXC 45 WROT DWV ELBOW	*	2-1/2 X 2 X 1-1/4 WROT TEE	*
3 CXC 45 WROT DWV ELBOW	*	2-1/2 X 2 X 1-1/2 WROT TEE	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
1-1/4 CXC 90 WROT DWV ELBOW	*	2-1/2 X 2 X 2 WROT TEE	*
1-1/4 FITXC 90 WROT DWV ELBOW	*	2-1/2 X 2 X 2-1/2 WROT TEE	*
1-1/2 FITXC 90 WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 1/2 WROT TEE	*
2 FITXC 90 WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 3/4 WROT TEE	*
1-1/2 CXC 90 WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 1 WROT TEE	*
2 CXC 90 WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 1-1/4 WROT TEE	*
3 CXC 90 WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 1-1/2 WROT TEE	*
1-1/2 CXC 90 LT WROT DWV ELBOW	*	2-1/2 X 2-1/2 X 2 WROT TEE	*
2 CXC 90 LT WROT DWV ELBOW	*	3 CXCXC WROT TEE	*
1-1/4 WROT TUBE END CLEANOUTS	*	3 X 3/4 X 3 WROT TEE	*
1-1/2 WROT TUBE END CLEANOUTS	*	3 X 1 X 3 WROT TEE	*
2 WROT TUBE END CLEANOUTS	*	3 X 1-1/4 X 3 WROT TEE	*
3 WROT TUBE END CLEANOUTS	*	3 X 1-1/2 X 1-1/4 WROT TEE	*
1-1/4 FLUSH FTG CLEANOUT	*	3 X 1-1/2 X 1-1/2 WROT TEE	*
1-1/2 FTG CLEANOUT-FLUSH TYPE	*	3 X 1-1/2 X 2-1/2 WROT TEE	*
1-1/2 X 1 FTG CLEANOUT - FLUSH	*	3 X 1-1/2 X 3 WROT TEE	*
2 FTG CLEANOUT-FLUSH TYPE	*	3 X 2 X 1/2 CXCXC WROT TEE	*
1-1/4 FTG CLEANOUT FULL PLUG	*	3 X 2 X 1 WROT TEE	*
1-1/2 FTG CLEANOUT FULL PLUG	*	3 X 2 X 1-1/4 WROT TEE	*
2 FTG CLEANOUT FULL PLUG	*	3 X 2 X 1-1/2 WROT TEE	*
1-1/4 FE X SJ WROT DWV ADAPTER	*	3 X 2 X 2 WROT TEE	*
1-1/2 FE X SJ WROT DWV ADAPTER	*	3 X 2 X 2-1/2 WROT TEE	*
1-1/2 X1-1/4 FE X SJ DWV ADAPT	*	3 X 2 X 3 WROT TEE	*
1-1/4 FTG X SJ WROT ADAPTER	*	3 X 2-1/2 X 3/4 WROT TEE	*
1-1/2 FTG X SJ WROT ADAPTER	*	3 X 2-1/2 X 1 WROT TEE	*
1-1/2 X 1-1/4 FTG X SJ ADAPTER	*	3 X 2-1/2 X 1-1/4 WROT TEE	*
1-1/4 M X SJ DWV ADAPTER	*	3 X 2-1/2 X 1-1/2 WROT TEE	*
1-1/2 M X SJ DWV WROT ADAPTER	*	3 X 2-1/2 X 2 WROT TEE	*
1-1/2 X 1-1/4 M X SJ DWV ADAPT	*	3 X 2-1/2 X 2-1/2 WROT TEE	*
1-1/4 C X SJ WROT ADAPTER	*	3 X 2-1/2 X 3 WROT TEE	*
1-1/4 X 1-1/2 CXSJ WROT CPLG	*	3 X 3 X 1/2 WROT TEE	*
1-1/2 C X SJ WROT ADAPTER	*	3 X 3 X 3/4 WROT TEE	*
1-1/2 X 1-1/4 CXSJ WROT ADAPTE	*	3 X 3 X 1 WROT TEE	*
2 C X SJ WROT ADAPTER	*	3 X 3 X 1-1/4 WROT TEE	*
1/8 CXC WROT PRESS COUPLINGS	*	3 X 3 X 1-1/2 WROT TEE	*
1/4 CXC WROT PRESS COUPLINGS	*	3 X 3 X 2 WROT TEE	*
1/4 X 1/8 CXC WROT COUPLING	*	3 X 3 X 2-1/2 WROT TEE	*
3/8 CXC WROT PRESS COUPLING	*	4 CXCXC WROT TEE	*
3/8 X 1/4 CXC WROT COUPLING	*	4 X 1-1/2 X 3 WROT TEE	*
1/2 CXC WROT COUPLING	*	4 X 2 X 2 WROT TEE	*
1/2 X 1/8 CXC WROT COUPLING	*	4 X 2 X 3 WROT TEE	*
1/2 X 1/4 CXC WROT COUPLING	*	4 X 2-1/2 X 2-1/2 WROT TEE	*
1/2 X 3/8 CXC WROT COUPLING	*	4 X 2-1/2 X 3 WROT TEE	*
5/8 CXC WROT COUPLING	*	4 X 3 X 2 WROT TEE	*
5/8 X 1/4 CXC WROT COUPLING	*	4 X 3 X 2-1/2 WROT TEE	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
5/8 X 3/8 CXC WROT CPLGS	*	4 X 3 X 3 WROT TEE	*
5/8 X 1/2 CXC WROT COUPLING	*	4 X 4 X 1/2 WROT TEE	*
3/4 CXC WROT COUPLING	*	4 X 4 X 3/4 WROT TEE	*
3/4 X 1/4 CXC WROT COUPLING	*	4 X 4 X 1 WROT TEE	*
3/4 X 3/8 CXC WROT COUPLING	*	4 X 4 X 1-1/4 WROT TEE	*
3/4 X 1/2 CXC WROT COUPLING	*	4 X 4 X 1-1/2 WROT TEE	*
3/4 X 5/8 CXC WROT COUPLING	*	4 X 4 X 2 WROT TEE	*
1 CXC WROT COUPLING	*	4 X 4 X 2-1/2 WROT TEE	*
1 X 3/8 CXC WROT COUPLINGS	*	4 X 4 X 3 WROT TEE	*
1 X 1/2 CXC WROT COUPLING	*	5 X 5 X 2 CXCXC WROT TEE	*