



Canadian International
Trade Tribunal

Tribunal canadien du
commerce extérieur

CANADIAN
INTERNATIONAL
TRADE TRIBUNAL

Dumping and Subsidizing

FINDING AND REASONS

Inquiry No. NQ-2017-004

Copper Pipe Fittings

*Finding issued
Friday, May 25, 2018*

*Reasons issued
Monday, June 11, 2018*

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IN THE MATTER OF an inquiry, pursuant to section 42 of the *Special Import Measures Act*, respecting:

COPPER PIPE FITTINGS

FINDING

The Canadian International Trade Tribunal (the Tribunal), pursuant to the provisions of section 42 of the *Special Import Measures Act*, has conducted an inquiry to determine whether the 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, have caused injury or are threatening to cause injury to the domestic industry.

This inquiry follows the issuance by the President of the Canada Border Services Agency of a preliminary determination dated January 25, 2018, and of a final determination dated April 25, 2018, that the above-mentioned goods have been dumped and subsidized.

Further to the Tribunal’s inquiry, the Tribunal hereby finds, pursuant to subsection 43(1) of the *Special Import Measures Act*, that the dumping and subsidizing of the above-mentioned goods originating in or exported from the Socialist Republic of Vietnam have caused injury to the domestic industry.

Serge Fréchette
Serge Fréchette
Presiding Member

Jean Bédard
Jean Bédard
Member

Rose Ritcey
Rose Ritcey
Member

The statement of reasons will be issued within 15 days.

APPENDIX

Products Covered by the Tribunal's Injury Finding

1. The table to this appendix lists the copper pipe fittings that are covered by the Tribunal's finding.
2. Copper pipe fittings are identified in terms of imperial measurement, i.e. inches. However, the metric equivalents of the imperial measurement are also covered by the Tribunal's finding. 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.
3. Copper pipe fittings are identified either as a wrought product or as a cast product. Where an asterisk ("*") follows a specific copper pipe fitting description, it indicates that both the wrought product and the cast product are covered by the finding.
4. Copper pipe fittings 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 Tribunal's finding also includes copper pipe fittings 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.
5. Copper pipe fittings are identified using the following list of abbreviated 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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
3 X 2 CXC 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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	
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	

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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 FTTXC 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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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 FTGXFEWMALE 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 FTGXFEWMALE 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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Subject Copper Pipe Fittings	Cast & Wrot	Subject Copper Pipe Fittings	Cast & Wrot
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	*
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	*

Place of Hearing: Ottawa, Ontario
Date of Hearing: April 23, 2018

Tribunal Panel: Serge Fréchette, Presiding Member
Jean Bédard, Member
Rose Ritcey, Member

Support Staff: Elysia Van Zeyl, Lead Counsel
Michael Carfagnini, Student-at-Law
Mark Howell, Lead Analyst
Thy Dao, Analyst
Andrew Wigmore, Analyst
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STATEMENT OF REASONS

INTRODUCTION

1. The mandate of the Canadian International Trade Tribunal (the Tribunal) in this inquiry¹ is to determine whether the dumping and subsidizing of certain 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. For the reasons that follow, the Tribunal has determined that the subject goods have caused injury to the domestic industry.

BACKGROUND

3. This inquiry stems from a complaint filed on September 11, 2017, by Cello Products Inc. (Cello) and the subsequent decision of the President of the Canada Border Services Agency (CBSA), on October 27, 2017, to initiate dumping and subsidy investigations.

4. The CBSA's investigations triggered the initiation of a preliminary injury inquiry by the Tribunal on October 30, 2017. On December 27, 2017, the Tribunal determined that the evidence disclosed a reasonable indication that the dumping and subsidizing of the subject goods from Vietnam had caused injury to the domestic industry.

5. On January 25, 2018, the CBSA issued its preliminary determinations of dumping and subsidizing, resulting in the imposition of provisional anti-dumping and countervailing duties on the subject goods and the commencement of this injury inquiry.² The Tribunal issued a notice of commencement of inquiry on January 26, 2018.³ On April 25, 2018, the CBSA made final determinations of dumping and subsidizing.⁴

6. The Tribunal's period of inquiry (POI) covers three full years, from January 1, 2015, to December 31, 2017. As part of its investigation, the Tribunal sent questionnaires to domestic producers, importers, purchasers and foreign producers of copper pipe fittings. The questionnaire replies and import data from the CBSA were used to prepare public and protected versions of the investigation report.⁵ The public investigation report was distributed, along with the public questionnaire replies, to parties who had filed notices of participation in the inquiry. A protected investigation report, containing information designated as confidential, was distributed to counsel who had signed the required declaration and undertaking.

7. Cello and the United Steelworkers filed submissions in favour of a finding of injury or threat of injury. The Tribunal did not receive any submissions opposing a finding of injury or threat of injury, nor did the Tribunal receive any requests for information or exclusions.

1. The inquiry is conducted pursuant to section 42 of the *Special Import Measures Act*, R.S.C., 1985, c. S-15 [SIMA].

2. Exhibit NQ-2017-004-01, Vol. 1.

3. Exhibit NQ-2017-004-03, Vol. 1.

4. Exhibit NQ-2017-004-05, Vol. 2.

5. The Tribunal's questionnaires collected volume data in terms of number of pieces with the exception of financial results for domestic producers which were also collected on a per-pound basis as this was the unit of measure in which Cello had presented its complaint.

8. After consulting the parties, the Tribunal decided to hold a hearing by way of written submissions. This hearing was held on Monday April 23, 2018, in Ottawa.

9. The Tribunal issued its finding on May 25, 2018.

RESULTS OF THE CBSA'S INVESTIGATION

10. The CBSA's period of investigation for its dumping investigation was September 1, 2016, to August 31, 2017. The CBSA's period of investigation for its subsidy investigation was from January 1, 2016, to August 31, 2017. As a result of these investigations, on April 25, 2018, the CBSA determined the subject goods imported into Canada had been dumped at a weighted average margin of dumping of 159 percent, expressed as a percentage of the export price of the subject goods.⁶ The CBSA also determined that the subject goods imported into Canada were subsidized at a weighted average amount of subsidy of 30.6 percent, when expressed as a percentage of the export price.⁷

11. Accordingly, the CBSA concluded that the overall margin of dumping and amount of subsidy were not insignificant.

PRODUCT

Product Definition⁸

12. The CBSA defined the subject goods as:

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 I**.

LEGAL FRAMEWORK

13. The Tribunal is required, pursuant to subsection 42(1) of *SIMA*, to inquire as to whether the dumping and subsidizing of the subject goods have caused injury or retardation or are threatening to cause injury, with "injury" being defined, in subsection 2(1), as "material injury to a domestic industry". In this regard, "domestic industry" is defined in subsection 2(1) by reference to the domestic production of "like goods".

14. Accordingly, the Tribunal must first determine what constitutes "like goods". Once that determination has been made, the Tribunal must determine what constitutes the "domestic industry" for purposes of its injury analysis.

15. Given that the CBSA has determined that the subject goods have been dumped and subsidized, the Tribunal must also determine whether it is appropriate to make an assessment of the cumulative effect of the dumping and subsidizing of the subject goods (i.e. whether it will cross-cumulate the effect) in this inquiry.

6. Exhibit NQ-2017-004-04, Vol. 1 at 205.107.

7. *Ibid.*

8. Note that the full product definition can be found in Exhibit NQ-2017-004-01, Vol. 1, Appendix 1 at 13.

16. The Tribunal can then assess whether the dumping and subsidizing of the subject goods have caused material injury to the domestic industry. Should the Tribunal find that the subject goods have not caused material injury during the POI, it will determine whether there exists a threat of material injury to the domestic industry.⁹ As a domestic industry is already established, the Tribunal will not need to consider the question of retardation.¹⁰

17. In conducting its analysis, the Tribunal will also examine other factors that might have had an impact on the domestic industry to ensure that any injury or threat of injury caused by such factors is not attributed to the effects of the dumping and subsidizing.

LIKE GOODS AND CLASSES OF GOODS

18. In order for the Tribunal to determine whether the dumping and subsidizing of the subject goods have caused or are threatening to cause injury to the domestic producers of like goods, it must determine which domestically produced goods, if any, constitute like goods in relation to the subject goods. The Tribunal must also assess whether there is, within the subject goods and the like goods, more than one class of goods.

19. Subsection 2(1) of *SIMA* defines “like goods”, in relation to any other goods, as follows:

- (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.

20. In deciding the issue of like goods when goods are not identical in all respects to the other goods, the Tribunal typically considers a number of factors, including the physical characteristics of the goods (such as composition and appearance) and their market characteristics (such as substitutability, pricing, distribution channels, end uses and whether the goods fulfill the same customer needs).¹¹

21. In addressing the issue of classes of goods, the Tribunal typically examines whether goods potentially included in separate classes of goods constitute “like goods” in relation to each other. If those goods are “like goods” in relation to each other, they will be regarded as comprising a single class of goods.¹²

22. In Inquiry No. NQ-2006-002, two subsequent expiry reviews, namely, RR-2011-001 and RR-2015-003, and the preliminary injury inquiry that preceded this injury inquiry, PI-2017-003, the Tribunal found that copper pipe fittings comprised a single class of goods and that domestically produced copper pipe fittings were “like goods” in relation to the subject goods. The Tribunal has not been presented with any evidence warranting a departure from these findings.

9. Injury and threat of injury are distinct findings; the Tribunal is not required to make a finding relating to threat of injury pursuant to subsection 43(1) of *SIMA* unless it first makes a finding of no injury.

10. Subsection 2(1) of *SIMA* defines “retardation” as “material retardation of the establishment of a domestic industry”.

11. See, for example, *Copper Pipe Fittings* (19 February 2007), NQ-2006-002 (CITT) at para. 48.

12. *Aluminum Extrusions* (17 March 2009), NQ-2008-003 (CITT) at para. 115; see also *Thermal Insulation Board* (11 April 1997), NQ-96-003 (CITT) at 10.

23. Accordingly, the Tribunal is satisfied that there is a single class of goods and that Cello's copper pipe fittings are "like goods" in relation to the subject goods.

DOMESTIC INDUSTRY

24. Subsection 2(1) of *SIMA* defines "domestic industry" as follows:

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 except that, where a domestic producer is related to an exporter or importer of dumped or subsidized goods, or is an importer of such goods, "domestic industry" may be interpreted as meaning the rest of those domestic producers.

25. The Tribunal must therefore determine whether there has been injury, or whether there is a threat of injury, to the domestic producers as a whole or those domestic producers whose production represents a major proportion of the total production of like goods.¹³

26. It is undisputed that Cello is the only domestic producer of copper pipe fittings. During the preliminary injury inquiry, it was argued by the Trade Remedies Authority of Vietnam, on the basis of the definition of "domestic industry" in section 2(1) of *SIMA*, that Cello should not be included as a domestic producer because it imports the subject goods. The Tribunal, however, found that Cello's imports were minimal and of a defensive nature. The Tribunal has not received any submissions challenging this preliminary finding. Moreover, the data gathered during the final injury inquiry continue to support these conclusions.¹⁴ As such, the Tribunal sees no basis for revisiting this finding. Accordingly, Cello constitutes the domestic industry for the purposes of this injury inquiry.

CROSS-CUMULATION

27. There are no legislative provisions that directly address the issue of cross-cumulation of the effects of both dumping and subsidizing. However, as noted in previous cases,¹⁵ the effects of dumping and subsidizing of the same goods from a particular country are manifested in a single set of injurious price effects and it is not possible to isolate the effects caused by the dumping from the effects caused by the subsidizing. In reality, when the dumped and subsidized goods originate from a single country, the effects are so closely intertwined as to render it impossible to allocate discrete portions to the dumping and the

13. The term "major proportion" means an important, serious or significant proportion of total domestic production of like goods and not necessarily a majority: *Japan Electrical Manufacturers Assn. v. Canada (Anti-Dumping Tribunal)*, [1986] F.C.J. No. 652 (F.C.A.); *McCulloch of Canada Limited and McCulloch Corporation v. Anti-Dumping Tribunal*, [1978] 1 F.C. 222 (F.C.A.); *China – Anti-dumping and countervailing duties on certain automobiles (US)* (23 May 2014), WTO Docs. WT/DS440/R, Report of the Panel at para. 7.207; *European Community – Definitive anti-dumping measures on certain iron or steel fasteners (China)* (15 July 2011), WTO Docs. WT/DS397/AB/R, Report of the Appellate Body at paras. 411, 419, 430; *Argentina – Definitive anti-dumping duties on poultry (Brazil)* (22 April 2003), WTO Docs. WT/DS241/R, Report of the Panel at paras. 7.341-7.344.

14. Exhibit NQ-2017-004-07 (protected), Tables 8, 10, Vol. 2.1.

15. See, for example, *Copper Rod* (28 March 2007), NQ-2006-003 (CITT) at para. 48; *Seamless Carbon or Alloy Steel Oil and Gas Well Casing* (10 March 2008), NQ-2007-001 (CITT) at para. 76; *Aluminum Extrusions* (17 March 2009), NQ-2008-003 (CITT) at para. 147; *Welded Large Diameter Carbon and Alloy Steel Line Pipe* (20 October 2016), NQ-2016-001 (CITT) at para. 84; *Fabricated Industrial Steel Components* (25 May 2017), NQ-2016-004 (CITT) at paras. 72-73; *Silicon Metal* (2 November 2017), NQ-2017-001 (CITT) at para. 59.

subsidizing respectively. Therefore, the Tribunal will make a cumulative assessment of the effects of the dumping and subsidizing of the subject goods.

INJURY ANALYSIS

28. Subsection 37.1(1) of the *Regulations* prescribes that, in determining whether the dumping and subsidizing have caused material injury to the domestic industry, the Tribunal is to consider the volume of the dumped and subsidized goods, their effect on the price of like goods in the domestic market, and their resulting impact on the state of the domestic industry. Subsection 37.1(3) also directs the Tribunal to consider whether a causal relationship exists between the dumping and subsidizing of the goods and the injury on the basis of the factors listed in subsection 37.1(1), and whether any factors other than the dumping and subsidizing of the goods have caused injury.

Import Volume of Dumped and Subsidized Goods

29. Paragraph 37.1(1)(a) of the *Regulations* directs the Tribunal to consider the volume of the dumped and subsidized goods and, in particular, whether there has been a significant increase in the volume, either in absolute terms or relative to the production or consumption of the like goods.

30. Absolute volumes of subject goods increased significantly over the POI. In 2016, the volume of subject goods increased by 62 percent.¹⁶ Notwithstanding a decline of 6 percent in 2017, the total volume of imports of the subject goods remained significantly higher in 2017 than in 2015.¹⁷ Combined imports from all countries increased in every period of the POI, but subject goods from Vietnam gained an increased share of this volume, increasing by 10 percentage points over the course of the POI and by 2017, comprising 47 percent of all imports.¹⁸

31. The data also point to a significant increase in volumes of subject goods relative to domestic production and domestic sales from domestic production between 2015 and 2017, despite a decline in 2017.¹⁹

32. Therefore, the Tribunal finds that there was a significant increase in the volume of subject goods in both absolute and relative terms.

Price Effects of Dumped and Subsidized Goods

33. Paragraph 37.1(1)(b) of the *Regulations* direct the Tribunal to consider the effects of the dumped and subsidized goods on the price of like goods and, in particular, whether the dumped and subsidized goods have significantly undercut or depressed the price of like goods, or suppressed the price of like goods by preventing the price increases for those like goods that would otherwise likely have occurred. In this regard, the Tribunal distinguishes the price effects of the dumped or subsidized goods from any price effects that have resulted from other factors affecting prices.

16. Exhibit NQ-2017-004-06, Table 9, Vol. 1.1.

17. *Ibid.*, Table 8.

18. *Ibid.*, Tables 8, 10. The Tribunal observes that import volumes presented in the investigation report can sometimes exceed the sum of volumes from questionnaire respondents due to the Tribunal's estimation of volumes for unsurveyed importers. The Tribunal notes that this type of estimation is commonly relied on in investigation reports.

19. *Ibid.*, Table 11.

Importance of Price

34. As has been found by the Tribunal previously in NQ-2006-002²⁰ and as purchasers indicated in their questionnaire responses, copper pipe fittings are commodity products, making the price quite important, and often determinative, in purchasing decisions.²¹ Questionnaire respondents also indicated that the only factor on which subject goods have an advantage over like goods is price.²² For many other factors surveyed, including product quality, range of product line, ability to meet technical specifications, availability of proprietary specifications, reliability of supply, and after-sales service and warranties, the subject goods and the like goods were rated as comparable

Price Undercutting

35. The subject goods tend to be the lowest-priced goods on the market.²³ In all years of the POI, the average unit values of subject goods are significantly less than the average unit values of like goods.²⁴ Average unit values of the subject goods were at their lowest in 2016 when the import volumes of the subject goods were at their peak.

36. Benchmark data, which eliminates the price variability arising from product mix issues, illustrates that the subject goods almost always undercut the price of like goods. Of the five benchmark products measured over eight quarters, there is only a single quarter among the 40 points of comparison in which the subject goods do not undercut the like goods.²⁵ The benchmark data bears out that the subject goods are consistently the lowest-priced copper pipe fittings on the market, particularly with respect to benchmark products 1²⁶ and 2,²⁷ which account for a significant proportion of the domestic industry's sales.²⁸ Further, with respect to benchmark products 1 and 2, the subject goods were clearly the price leaders. The degree of price undercutting varies by product and by quarter; however, undercutting was pervasive throughout the POI, and in most instances, the degree of undercutting increased over the POI.²⁹

37. On the basis of both the aggregate and the benchmark data, the Tribunal finds that the subject goods have significantly undercut the price of like goods.

Price Depression

38. The trends in average unit values do not suggest price depression. In fact, the average unit values of like goods increased by 11 percent in 2016 and a further 4 percent in 2017.³⁰ Further, the increase in the price of the like goods in 2016 occurred even while the average unit values of the subject goods decreased by 28 percent.³¹

20. *Copper Pipe Fittings* (19 February 2007), NQ-2006-002 (CITT) at para. 109.

21. Exhibit NQ-2017-004-06, Tables 5, 6, 7, Vol. 1.1.

22. *Ibid.*, Table 5.

23. Exhibit NQ-2017-004-07 (protected), Table 17, Vol. 2.1.

24. *Ibid.*

25. *Ibid.*, Table 26.

26. Benchmark product 1 is a ¾" C × C 90 Degree Elbow.

27. Benchmark product 2 is a ½" C × C 90 Degree Elbow.

28. Exhibit NQ-2017-004-07 (protected), Table 24, Vol. 2.1.

29. *Ibid.*, Table 26.

30. Exhibit NQ-2017-004-06, Table 18, Vol. 1.1.

31. *Ibid.*, Tables 14, 17, 18.

39. However, Mr. Howell's witness statement contains numerous specific examples of Cello having to significantly reduce its selling price in order to win or retain business in the face of significantly lower prices offered by distributors of the subject goods.³² This evidence details a consistent pattern of price concessions by the domestic industry in reaction to fierce price competition from the subject goods. Therefore, on this basis, the Tribunal concludes that the subject goods significantly depressed the price of like goods, particularly in 2016.

40. The Tribunal considered whether imports of copper pipe fittings from non-subject countries could have exerted some pricing pressures on Cello, given that volumes from these sources also increased over the POI.³³ However, the data reveal that these goods were usually priced higher than the subject goods, in the aggregate, as well as with respect to benchmarks.³⁴ Moreover, in many instances, goods from the non-subject countries were also priced higher than the like goods.³⁵ Accordingly, it does not appear that the prices of goods from non-subject countries would have significantly depressed the prices of like goods.

Price Suppression

41. To measure price suppression, the Tribunal often examines the relationship between changes in unit selling prices and unit cost of goods sold (COGS) to determine if domestic producers have been able to increase selling prices in step with increases in COGS. Between 2015 and 2017, COGS increased.³⁶ When considered on a \$/piece basis, Cello's COGS for domestic sales increased every year of the POI, and although Cello's unit values also increased, it was to a lesser degree.³⁷ Thus, there is some evidence that the subject goods may have suppressed the price of like goods during the POI.

Resultant Impact on the Domestic Industry

42. Paragraph 37.1(1)(c) of the *Regulations* requires the Tribunal to consider the resulting 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.³⁸ These impacts are to be distinguished from the impact of other factors also having a bearing on the domestic industry.³⁹

32. Exhibit NQ-2017-004-A-04 (protected) at paras. 3-26, Vol. 12.

33. Exhibit NQ-2017-004-07 (protected), Table 8, Vol. 2.1.

34. *Ibid.*, Tables 17, 19, 20, 21, 22, 23.

35. *Ibid.*, Tables 19, 20, 21, 22, 23.

36. *Ibid.*, Table 36.

37. Exhibit NQ-2017-004-06, Table 18, Vol. 1.1.

38. Such factors and indices include (i) any actual or potential decline in output, sales, market share, profits, productivity, return on investments or the utilization of industrial capacity, (ii) any actual or potential negative effects on cash flow, inventories, employment, wages, growth or the ability to raise capital, (ii.1) the magnitude of the margin of dumping or amount of subsidy in respect of the dumped or subsidized goods, and (iii) in the case of agricultural goods, including any goods that are agricultural goods or commodities by virtue of an Act of Parliament or of the legislature of a province, that are subsidized, any increased burden on a government support programme.

39. Paragraph 37.1(3)(b) of the *Regulations* directs the Tribunal to consider whether any factors other than dumping or subsidizing of the subject goods have caused injury. The factors which are prescribed in this regard are (i) the volumes and prices of imports of like goods that are not dumped or subsidized, (ii) a contraction in demand for the goods or like goods, (iii) any change in the pattern of consumption of the goods or like goods, (iv) trade-restrictive practices of, and competition between, foreign and domestic producers, (v) developments in technology, (vi) the export performance and productivity of the domestic industry in respect of like goods, and (vii) any other factors that are relevant in the circumstances.

Paragraph 37.1(3)(a) of the *Regulations* requires the Tribunal to consider whether a causal relationship exists between the dumping or subsidizing of the goods and the injury, retardation or threat of injury, on the basis of the volume, the price effects, and the impact on the domestic industry of the dumped or subsidized goods.

43. In respect of copper pipe fittings, demand is driven largely by activity in the construction sector, particularly by non-residential construction.⁴⁰ Activity in this sector has increased between 2015 and 2017,⁴¹ and consequently, so has the demand for copper pipe fittings.⁴² Yet, Cello's performance has declined materially as a result of the significant increased volumes and price effects of the subject goods.

Market Share

44. Although some questionnaire respondents indicated that alternative products (such as PEX fittings or plastic alternatives⁴³) may be having an impact on demand for copper pipe fittings⁴⁴ and Cello acknowledges this possibility, the market for copper pipe fittings grew steadily over the POI.⁴⁵ Cello was unable to capture any of this growth, as it lost market share. The data in the investigation report demonstrate that the market share of the subject goods grew at the expense of both the domestic industry and goods from non-subject countries, reaching a high point in 2016.⁴⁶

Sales

45. The volume of Cello's domestic sales from domestic production declined in every year of the POI, but this decline was most significant in 2016 when the volumes and price effects of the subject goods peaked.⁴⁷ These declines in sales are largely attributable to the sales that were lost or scaled back as detailed in Mr. Howell's witness statement, and with the purchase data provided by some of Cello's top customers.⁴⁸ The data provided by Cello's top customers also demonstrates that these customers switched to subject goods to fulfil some or all of their requirements.⁴⁹

Profitability

46. On a percent of sales basis, Cello's gross margins decreased in each period of the POI and its net income declined, most notably in 2016 when the volumes and price effects of the subject goods peaked.⁵⁰

40. *Copper Pipe Fittings* (17 February 2012), RR-2011-001 (CITT) at para. 92. See also Cello's complaint, Exhibit PI-2017-003-02.01, Vol. 1 at 44.

41. Exhibit NQ-2017-004-06, Table 47, Vol. 1.1.

42. *Ibid.*, Table 13; Exhibit NQ-2017-004-07 (protected), Table 12, Vol. 2.1.

43. Exhibit NQ-2017-004-20.02, Vol. 5.2 at 61-62; Exhibit NQ-2017-004-20.03, Vol. 5.2 at 74; Exhibit NQ-2017-004-20.04, Vol. 5.2 at 101; Exhibit NQ-2017-004-20.05, Vol. 5.2 at 117-118; Exhibit NQ-2017-004-21.06 (protected), Vol. 6.2 at 50; Exhibit NQ-2017-004-21.07 (protected), Vol. 6.2 at 64; Exhibit NQ-2017-004-20.08, Vol. 5.2 at 172; Exhibit NQ-2017-004-20.13, Vol. 5.2 at 245-246.

44. Exhibit NQ-2017-004-06, Table 6, Vol. 1.1.

45. *Ibid.*, Table 13; Exhibit NQ-2017-004-07 (protected), Table 12, Vol. 2.1.

46. *Ibid.*, Table 14.

47. *Ibid.*, Table 40; Exhibit NQ-2017-004-06, Table 41, Vol. 1.1.

48. Exhibit NQ-2017-004-A-04 (protected) at paras. 3-26, Vol. 12; Exhibit NQ-2017-004-07 (protected), Schedules 14, 16, Vol. 2.1.

49. *Ibid.*, Schedules 12-14, 16; Exhibit NQ-2017-004-07A (protected), Schedule 15, Vol. 2.1.

50. Exhibit NQ-2017-004-07 (protected), Tables 35, 36, Vol. 2.1. The investigation report presents Cello's financial data both on a per-pound basis, which was Cello's preference, and a per-piece basis. The trends in financial results differ somewhat between the two units of measure.

47. Cello claimed that its financial performance on export sales has been much more positive than its performance on domestic sales. While it is true that Cello's export sales tend to attract higher per-unit gross margins, the total volume of export sales declined over the POI.⁵¹ While this decline may have had some negative impact on Cello's overall performance, it does not negate the negative impact attributable to the subject goods.

Production

48. Cello's total production volume declined significantly in 2016, before increasing somewhat in 2017.⁵² While the greatest decline in production was attributable to its production for exports, the decline in production for domestic sales was also significant. In 2017, greater recovery is seen in production for domestic sales than in production for export sales, but both remained well below 2015 levels. Cello's production volume reached its lowest point in 2016, corresponding with the period in which the volumes of subject goods peaked and their prices were the lowest.

Capacity Utilization

49. The capacity utilization rate has declined since 2015, reaching its lowest point in 2016 when the volumes of subject goods peaked and their prices were the lowest. The Tribunal observes that capacity utilization levels were low throughout the POI. In part, this may reflect Cello's very high production capacity compared to the overall size of the Canadian market for copper pipe fittings.⁵³ However, the consistently low and falling utilization rates are also attributable to the negative impact of the subject goods.

Employment and Wages

50. Employment, hours worked and wages all declined, for the most part, reaching their lowest points in 2016.⁵⁴

51. According to the statement of the witness for the United Steelworkers, Cello informed the union that layoffs were due to the fact that its customers were purchasing copper pipe fittings directly from Asian manufacturers at prices with which it was unable to compete.⁵⁵ Although some workers were brought back in 2017, employment remained far below 2015 levels. Of those workers who were not laid off, Ms. Batista indicated that some were shifted to different positions and required substantial retraining, which has also had an adverse impact on the company.

Materiality and Causality

52. The Tribunal will now determine whether the effects of imports of the subject goods noted above are "material", as contemplated in the definition of "injury" under section 2 of *SIMA*. *SIMA* does not define the term "material". However, both the extent of injury during the relevant time frame and the timing and duration of the injury are relevant considerations in determining whether any injury caused by the subject goods is "material".⁵⁶

51. Exhibit NQ-2017-004-07 (protected), Table 37, Vol. 2.1.

52. *Ibid.*, Table 40; Exhibit NQ-2017-004-06, Table 41, Vol. 1.1.

53. Exhibit NQ-2017-004-07 (protected), Tables 12, 40, Vol. 2.1.

54. *Ibid.*, Table 40; Exhibit NQ-2017-004-06, Table 41, Vol. 1.1.

55. Exhibit NQ-2017-004-B-03 at para. 14, Vol. 11.

56. The Tribunal suggested, in *Certain Hot-rolled Carbon Steel Plate* (27 October 1997), NQ-97-001 (CITT) at 13, that the concept of materiality could entail both temporal and quantitative dimensions; "[h]owever, the Tribunal is of the view that, to date, the injury suffered by the industry has not been for such a duration or to such an extent as to constitute 'material injury' within the meaning of *SIMA*" [emphasis added].

53. In this case, as discussed above, the significant increase in import volumes of the subject goods and the significant price undercutting by the subject goods have resulted in injury to the domestic industry in the form of lost sales and market share, declining profitability, declines in output, and loss of employment. Cumulatively, this injury was extensive.

54. Moreover, this injury is evident throughout the duration of the POI, but is particularly noticeable in 2016, when the volumes of the subject goods were at their highest and prices at their lowest.

55. In light of the evidence, there is no question that the extent and duration of the injury experienced by the domestic industry has been material. Further, the Tribunal finds that the evidence demonstrates a causal relationship between that injury and the dumping and subsidizing of the subject goods.

56. The other factors that may have negatively affected Cello have been discussed above and, as indicated, there was either no impact or that impact did not negate the negative impact of the subject goods.

57. On the basis of the foregoing, the Tribunal finds that the subject goods have caused material injury to the domestic industry. Accordingly, the Tribunal need not consider the question of whether the subject goods are threatening to cause injury.

CONCLUSION

58. Pursuant to subsection 43(1) of *SIMA*, the Tribunal finds that the dumping and subsidizing of the subject goods from Vietnam have caused injury to the domestic industry.

Serge Fréchette
Serge Fréchette
Presiding Member

Jean Bédard
Jean Bédard
Member

Rose Ritcey
Rose Ritcey
Member