PLAINTIFF'S EXHIBIT

CT-1293

CertainTeed

Technical Bulletin

c.cc to SH JDH 5-21-79

TO: All District Sales Managers
All Territory Managers
All Administrative Supervisors
All Inside Sales Representatives
All Field Service Managers
All A/C Plant Managers
All A/C Customer Service Managers

FR: Frank T. Duffy/bam

RE: A/C SEWER PIPE REDESIGN

After much too long a time it appears that we are rapidly approaching the acceptance by ASTM of a redesigned A/C Sewer Pipe. This technical bulletin is being issued to give you foreknowledge of what is proposed so you will not have any surprises or become victims of any misinformation.

There are really only two basic changes in the standard. We have abandoned our present class system which is difficult to defend from an engineering standpoint and adopted a classification system which makes much better engineering sense. We have also abandoned our present wood block crush test method in favor of the ISO "V"-block. The ISO "V"-block gives us much better fidelity in the tests and it is the method prescribed by the Inter-National Standards Organization.

Crush classification merely means that for any given series as the diameter increases the crush strength increases. This is the system that clay and concrete have used for years and it is amiable to the common sense notion that the bigger the pipe the more load it has to carry.

The ASTM committee has tentatively decided that the market would be best served by three series of pipe rather than clay's two series and concrete's three series in non-reinforced pipe and five series in reinforced pipe. The committee further decided that our pipe should be designed on the basis of "B" bedding (load factor = 1.9), safety factor = 1.5, and depths of bury of 8'-0", 14'-0" and 20'-0". These three series will encompass approximately 98% of the pipe we sell.

We have attached three tables comparing our proposed crush values with the appropriate clay and concrete values.

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Be advised that in no way do we ever suggestor imply that our pipe is good for 8'-0" bury, 14'-0" bury or 20'-0" bury. The depth of bury is a function of the bedding and safety factor and as always the pipe selection is the responsibility of the engineer.

The ASTM committee has decided to establish a minimum crush value of 1500#/ft.

The flex values are exactly the same as now prescribed in ASTM C-428 based on comparable crush values.

Roman Korobij will issue a more technically detailed bulletin to the sales engineers, A/C Quality Control Managers and R&D.

If you have any questions, Roman Korobij or I will be happy to answer them for you.

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PIPE
PROPOSED A/C SEWER CRUSH VALUES
VERSUS COMPETITIVE PRODUCTS

SIZE	A/C V-BLOCK CRUSH SERIES I	VCP CRUSH STANDARD STRENGTH	NON-REINFORCED CONCRETE C-14 CRUSH CLASS I	REINFORCED CONCRETE C-76 0.01" CRACK CRUSH CLASS II
4"	1500	1200	1500	-
5"	1500	-	-	-
6"	1500	1200	1500	-
8"	1500	1400	1500	-
10"	1600	1600	1600	-
12"	1800	1800	1800	1000
14"	1900	-	-	-
15"	2000	2000	2000	1250
16"	2000	-	-	-
18"	2200	2200	2200	1500
20"	2300	-	-	-
21"	2400	2400	2400	1750
24"	2600	2600	2600	2000
27"	2800	2800	2800	2250
30"	3000	3300	3000	2500
33"	3200	3600	3150	2750
36"	3400	4000	3300	3000
39"	3700	-	-	-
42"	3900	-	-	3500

SIZE	A/C V-BLOCK CRUSH SERIES II	VCP CRUSH EXTRA STRENGTH	C-14 CRUSH CLASS 2	C-76 0.01" CRACK CLASS III
4"	2000	2000	2000	-
5"	2000	-	-	-
6"	2000	2000	2000	-
8"	2000	2200	2000	-
10"	2200	2400	2000	-
12"	2400	2600	2250	1350
14"	2600	-	-	-
15"	2600	2700	2600	1688
16"	2800	-	-	-
18"	3000	3300	3000	2025
20"	3200	-	-	-
21"	3300	3850	3300	2363
24"	3600	4400	3600	2700
27"	3900	4700	3950	3038
30"	4200	5000	4300	3375
33"	4500	5500	4400	3713
36"	4900	6000	4500	4050
39"	5200	6600	-	-
42"	5500	7000	-	4725

SIZE	A/C V-BLOCK CRUSH SERIES III	VCP CRUSH EXTRA STRENGTH	C-14 CRUSH CLASS 3	C-76 0.01" CRUSH CLASS IV
4"	2000	2000	2400	-
5"	2000	-	-	-
6"	2000	2000	2400	-
8"	2300	2200	2400	-
10"	2500	2400	2400	-
12"	2700	2600	2600	2000
14"	3000	-	-	-
15"	3100	2900	2900	2500
16"	3200	-	-	-
18"	3500	3300	3300	3000
20"	3800	-	-	-
21"	3900	3850	3850	3500
24"	4300	4400	4400	4000
27"	4700	4700	4600	4500
30"	5100	5000	4750	5000
33"	5500	5500	4875	5500
36"	6000	6000	5000	6000
39"	6400	6600	-	-
42"	6800	7000	-	7000