K. W. Brown
Acme, Texas

Ardmore, Pa.

February 14, 1963

PLAINTIFF'S EXHIBIT
GP-1032

TO: All Systems Engineers

CC: All District Managers
All Gypsum Plant Managers

E. L. Mongold - Ardmore
C. E. Martin - Ardmore
C. C. Shuttleworth - Paoli
H. H. Powers - Paoli
E. B. Hollingsworth - Paoli

SUBJECT: SOUND TRANSMISSION DATA

RE: Personal References - Systems Engineer Manual

BY: C. S. Abbey CSA

Under date of October 31, Walter Stoll sent out a bulletin to all salesmen under the subject "Sound Transmission Data" and enclosed six pages of data, giving the sound transmission characteristics of many assemblies. These were to have been put in Chapter X of the Gypsum Product Manual.

Each of the Systems Engineers ought to have a copy of this in his personal copy of his Systems Engineer Manual in the back under Section IX Personal References.

For those of you who may not be familiar with it or not have a copy of it, attached hereto is a copy. There are two or three simple technical bulletins on Sound Transmission of Building Assemblies as well as Sound Absorption characteristics of Building Materials which you ought to become acquainted with. Two bulletins distributed by the Acoustical Materials Association (AMA) are included in your Gypsum Products Manual in the Chapter X.

With reference to the material on the six pages, the following comments should be helpful:

1. Where the trade name Bestwall Gypsum Wallboard and Bestwall Firestop have been used, please bear in mind the listing is a summary of data available to Bestwall based not only on tests where Bestwall was the sponsor and Bestwall materials were used but also on Bureau of Standard industry tests, tests sponsored by the Gypsum Association, by metal framing manufacturers, and by other manufacturers. We may not be able to give you a copy of an official test report. However, the official test reports for both sound transmission and sound absorption are very brief, generally being two pages to three at most and involve a description of the assembly (briefly summarized in this table) a graph, and a chart of the observations (also shown in the list). On each assembly notice a test number has been assigned, the year the test was made indicated, and at the end are three figures explained later. The test numbers prefaced by the letters BS refer to a Bureau of Standards test and by the letters RB, RW, or RL to tests made at Riverbanks Laboratories in Geneva, Illinois.

Riverbanks was formerly an independent organization, but it is now part of the Armour Research Institute of Chicago. Incidentally, the first numbers following TR are the year of the test. Where the designation under the column headed Test Number is G-H, tests were made at Geiger and Homme, a relatively new sound testing laboratory located in Ann Arbor Michigan.

2. In determining the sound transmission characteristics of a wall or ceiling assembly, the normal test procedure is to determine decibel loss of sound intensity through the assembly at different frequencies. Notice in the six pages that there are 11 columns under the group, starting with 125 and ending with 4000. Years ago the common acceptable way was to measure the loss at nine frequencies. In recent years this has been increased to eleven frequencies.

The reason for showing two figures for frequency heading is again differences that have developed during the years. Notice the ratios beginning with the figure 1 for 128, the succeeding numbers are $1\frac{1}{2}$, 2, 3, 4, 6, 8, approximately 11, approximately 22, and approximately 40. This was later changed to start out with 125 and roughly approximate the proportional increases with two numbers not being taken. The figure generally quoted as the sound transmission loss of an assembly is the arithmetic average of the loss at nine frequencies. This is that in shown in the column headed Average DB, 128 to 4096.

3. The measurement of sound transmission through assemblies has been limited to two facilities (National Bureau of Standards and Riverbanks Laboratories) until very recent years. It is very technical. These people have made changes in their test procedure from year to year without regard to the end results or to the sponsors of sound transmission tests. Many people in industry noticed in 1953, 1954, and 1955 that it was practically impossible to retest an assembly except heavy masonry walls that had been tested in the 40's and get the same result. The differences became so obvious that in December of 1956, and effective January of 1957, the Riverbanks Laboratories officially advised all manufacturers and other organizations concerned with sound tests either in years before or in the future that changes in their method of test would result in a better and truer evaluation of the sound transmission characteristics of the assembly, but that the results obtained in the previous years were too high and as a result, to make the earlier results true, they should be reduced by an average of five decibels. In view of the great deal of promotion that had been given to the average decibel loss of [illegible] assemblies through the years, manufacturers in general refused to go along with that idea and you will find that many should numbers published in tests after 1957 and added five decibels to it [illegible] and made comparable to earlier tests. This is the reason for the [illegible] to the last column which lists "Average plus 5" [illegible] and shows a figure that is 5 over the preceding column [illegible] 1957 or later.

[illegible] the National Bureau of Standards decided that instead of an arithmetical average for the average value of the assembly there should have been a "Weighted Average," which was calculated from the test results on an involved formula, the net results of which increased loss on heavy thick assemblies and decreased the decibel loss for light thin constructions. This was abandoned very shortly after it was proposed. Now a new method has been devised of showing the decibel loss for an assembly as the "Class Rating". This is a method giving greater weight to the values in the middle range of frequencies, 250 to 700, which represent the more common noise levels, normal talking, and normal activity within a room.

It is determined by applying a standard curve to the graph of the losses determined in the test at the nine frequencies. Results developed in tests today are being reported as a "Class Rating" since it is the contention of the technicians in the sound transmission field that the arithmetical average is misleading.

4. Competitively-wise one of the things that must be analyzed carefully is just what the figure is that is quoted for a competitive system. Is it an arithmetical average for the nine frequencies, or of eleven frequencies? The "Class Rating" or more importantly, a figure for one frequency only and of the better figures, at that? If you will study the values shown on the attachment of the various assemblies, you will notice a wide variety of figures over the eleven frequency range from many assemblies. On the other hand, there are a few that are fairly constant. Without an excellent grounding in technicalities of acoustics, you should be extremely careful in telling a building owner, architect, or contractor that by doing certain things, they can improve or change their wall assembly and improve its sound transmission characteristics (decrease the amount of sound transmission generally). Remember, you cannot add the losses of two assemblies if the two walls were put together. Strictly speaking, the sound transmission characteristics of an assembly which has not been tested can only be officially determined in a test. Even the technicians at the sound testing laboratories have been proven wrong on their assumptions when certain assemblies have been tested.

5. [illegible], as well as the other companies, make sound tests of new assemblies as they are developed. You will be given additional information when it is available.

For additional information along these lines, particularly with plaster assemblies, refer to the booklet each salesman should have entitled "Lathing and Plastering Selection Data Assemblies", published by the National Bureau of Lathing and Plastering. The National Bureau of Standards "Building Materials and Structures Report 144" (including supplements) entitled "Sound Insulation of Wall and Floor Constructions". This booklet with the various supplements that have been issued can be obtained from the Government Printing Office for less than $1.00. There are several pages of preamble which would be an ample backing technically-wise for those of you who have little or no grounding in physics, engineering, or architecture, and are concerned with knowing more about just what sound transmission is. Refer also to the [illegible] folders mentioned at the beginning.

SGP 0003557

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PARTITIONS

HOLLOW WALLS

FACING ON BOTH SIDES-WALLBOARD	WOOD FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL LB. PER SQ. FT.	FREQUENCIES – (CPS) 125 128	175 192	250 256	350 384	500 512	700 768	1000 1024	1414	2000 2048	2828	4000 4096	YEAR OF TEST	DB. AVER. 128 TO 4096	AVER. PLUS 5	CLASS RATING
1/4" PLYWOOD-GLUED	1" x 3"	16"o.c.	3 1/8"	BS-211	2.5	16	16	18	20	26	27	28		37		33	1943	24		
1/4" PLYWOOD-GLUED	1" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	4 1/8"	BS-214	2.9	14	17	20	23	28	30	33		40		30	1943	29		
1/2" BWG – NAILED	2" x 4"	16"o.c.	4 5/8"	BS-234	5.6	22	23	28	32	33	41	44		46		39	1953	34		
1/2" BWG – NAILED	2" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	4 5/8"	BS-242	6.2	36	31	36	40	40	46	47		52		45	1957	42	47	
1/2" BWG – SCREWED	BWG STUD	24"o.c.	4"	RVB	4.1	26	27	33	37	40	44	41	48	50	42	40	1957	38		
5/8" BWG – NAILED	2" x 4"	16"o.c.	4 7/8"	BS-240	7.2	30	22	31	30	37	39	44		39		52	1957	37	42	
5/8" BWG – NAILED	2" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	4 7/8"	Bs-243	7.7	43	44	37	38	40	46	48		41		50	1957	43	48	
			4 7/8"	TR56-14	8.7	—	—	—	—	—	—	—		—		—	1956	43		
5/8" BWG F/S-NAILED	2" x 4"	16"o.c.	4 7/8"	TR52-16	7.1	25	27.5	33	38	40	43	48.5		46.5		45.5	1952	39		
2 LAYERS 3/8" BWG-NAILED (HUMMER SYSTEM "A")	2" x 4"	16"o.c.	5 1/8"	BS-225	8.2	27	24	31	35	40	42	46		58		48	1948	38		
2 LAYERS 1/2" BWG-NAILED	2" x 4"	16"o.c.	5 5/8"		9.9	NO TEST AVAILABLE										ESTIMATED		39		
2 LAYERS 1/2" BWG-NAILED	2" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	5 5/8"	BS-235	11.0	42	40	39	40	45	42	45		41		53	1953	43		
2 LAYERS 5/8" BWG-NAILED	2" x 4"	16"o.c.	6 1/8"	BS-241	12.9	33	28	30	36	37	40	45		44		57	1957	40	45	
2 LAYERS 5/8" BWG-NAILED	2" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	6 1/8"	BS-244	13.4	41	41	41	43	46	48	49		41		54	1957	45	50	
3/8" BAX-RLCLIPS – 3/8" REG.	2" x 4"	16"o.c.	5 1/4"	TR59-9	8.2	34	36	40	44	44	44	46		48.5		46	1958	42	47	

*BWG – BESTWALL GYPSUM
F/S – FIRESTOP

Ardmore, Pennsylvania

October 31, 1962

TO: All District Managers
All Salesmen

FROM: General Sales

SUBJECT: SOUND TRANSMISSION TESTS

BY: W. O. Stoll - sad

We have regrouped and added to the list of the Transmission Loss Tests under Chapter X of the Gypsum Products Manual. You will now have tests on Plaster Systems, Solid and Semi-Solid Partition Systems and Bestwall Ceiling Tile.

Please note that some of these tests are made by cooperating manufacturers of steel partition components.

These six (6) pages are to replace the test list now in your Manual. Familiarize yourself with the sales aids available to you in this data.

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PARTITIONS

HOLLOW WALLS

FACING ON BOTH SIDES-WALLBOARD	METAL FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL LB. PER SQ. FT.	FREQUENCIES (CPA) 125	175	250	350	500	700	1000	1414	2000	2828	4000	YEAR OF TEST	DB. AVER. 128 TO 4096	AVER. PLUS 5
						128	192	256	384	512	768	1024		2048		4096			
5/8" GYP. WALLBD.	F & H 3 1/4" NAILING STUDS	24"o.c.	4 3/4"	TR56-43	6.1	28	36.5	41.5	44.5	47	49.5	53.5	51	53.5	45	48.5	1956	45	
5/8" GYP. WALLBD.	DONN 3 5/8" SCREW	16"o.c.	4 7/8"		7.0	32	32	38	40	43	44			46		51	1961	42	44
5/8" GYPSUM WALLBD.	F & H 3 1/2" NAILING STUD (STAGGERED)	12"o.c. (24"o.c.)	5 1/2"	TR56-44	6.6	30.5	36	41.5	47.5	50	50	52		53.5		51.5	1956	45	
5/8" GYPSUM WALLBD. PLUS 3/8" GYP. WALLBD.	PENN METAL NAILING STUD	24"o.c.	5 5/8"	TR55-50	12.8	31.5	33.5	41	47	47.5	46.5	51		55		51.5	1955	45	
SAME	(STAGGERED)	(24"o.c.)	5 5/8"	TR55-51	12.8	33	35	42	47	48.5	47.5	51		58		52	1955	46	
5/8" F/S- FINISHED	PENN METAL 3 5/8" NAILING STUD	24"o.c.	4 7/8"	TN-FI03 -655	6.1	25	30	27	30	34	37	39		36		41	1960	34	39
5/8" F/S - PANELED	PENN METAL 2 1/2" CLIP STUD	24"o.c.	3 3/4"	TN-FI03 -656	6.4	24	28	36	28	32	38	42		36		42	1960	34	39
5/8" F/S- ETERNAWALL	PENN METAL 2 1/2" CLIP STUD	24"o.c.	3 3/4"	TL-61 -144	7.0	26	28	35	38	42	43	45		35		47	1961	38	43
3/8" GYPSUM BACKER BD. CLIPPED TO STUD PLUS 3/8" BD. LAM.	3 1/4"	16"o.c.	5"	BS-247	7.5	35	34	39	43	44	49	50		50		51	?	45	
3/8" GYPSUM LATH CLIPPED TO STUDS	3 1/4" MOLDED IRON	16"o.c.	6 1/4"	G-H	8.5	27	31	34	40	44	54	55	59	58	58	61	1961	47.2	

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PARTITIONS

SOLID WALL CONSTRUCTIONS	WOOD FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL WT. PER SQ. FT.	FREQUENCIES (CPA) 125 / 128	175 / 192	250 / 256	350 / 384	500 / 512	700 / 768	1000 / 1024	1414	2000 / 2048	2828	4000 / 4096	YEAR OF TEST	AVER. 128 TO 4096	AVER. PLUS 5
2 LAYERS 1/2" BWG - GLUED	—	—	1"	BS-528	4.5	24	25	29	32	31	33	32		30		34	1942	30	
4 LAYERS 1/2" BWG - GLUED	—	—	2"	BS-522	8.9	28	35	32	37	34	36	40		38		49	1949	37	
4 LAYERS 1/2" BWG - GLUED	—	—	2"	TR56-15	8.8	33.5	37.5	39	38	39.5	37.5	40		44		41	1956	39	
SOLID GYP. WALLBD-1 1/4" LAM. C. PLUS 2P. 3/8"		—	2 1/4"	TR54-39	7.8	32.5	38	39	37	37	38.5	42.5		47.5		40.5	1954	39	
SOLID GYP. WALLBD.-1 1/4" LAM.C. PLUS 2P. 3/8"		—	2 1/4"	TR54-38	8.2	31.5	36.5	40	40	38.5	38.5	40.5		45		39	1954	39	
SOLID GYP.WALLBD.-1 1/2" LAM.C. PLUS 2P. 1/2"		—	2 3/4"	TR54-40	10	34.5	40.0	42.5	42.5	42	39	39.5		49.5		42	1954	41	
SOLID GYP. WALLBD.-1" CORE PLUS 2P. 5/8" (VAUGHN PARTITION)		—	2 1/4"	TR59-98	10.6	34.5	35	36	37.5	36	34	33.5		36		39	1959	36	41
SEMI SOLID CONSTRUCTIONS																			
BESTWALL HUMMER SYS. "C"			2 1/4"	TL60-181	7.7	23	23	31	36	36	38	39		36		41	1960	34	39
BESTWALL HUMMER SYSTEM "B"			2 1/4"	TR67-41	7.2	23	21.5	26	29.5	31	32	33		31		38.5	1957	30	35
BESTWALL HUMMER SYS. "B" MOD.(2 LAYERS)			4"	TR57-42	15.0	29.5	31.0	34.5	37.0	38.0	36.5	35.0		42.0		51.5	1957	37	42
BESTWALL HUMMER SYS. "B" MOD.(2 LAYERS)			5"	TR57-43	15.5	32.0	34.0	37.5	39.5	39.5	38.0	38.5		46.5		54.0	1957	40	45
2' WIDE PREFAB PARTITION 5/8" GYPSUM WALLBOARD.			2 1/4"	GH-BW-9FT.	7.3	27	24	20	29	34	33	37	40	35	37	39	1962	32.4	
4' WIDE PREFAT PARTITION 5/8" FIRESTOP BOARD (HUMMER "B")			2 1/4"	GH-BW-8FT.	6.4	21	17	27	34	36	40	39	43	36	36	39	1962	33.5	

*BWG - BESTWALL GYPSUM

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PARTITIONS

DONN PRODUCTS - SYSTEM-WALLBOARD

FACING ON BOTH SIDES-WALLBOARD	METAL FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL LB.PER SQ.FT.	FREQUENCIES (CPA) 125 128	175 192	250 256	350 384	500 512	700 768	1000 1024	1400 1414	2000 2048	2800 2828	4000 4086	YEAR OF TEST	DB.AVER. 128 TO 4096	AVER. PLUS 5	CLASS RATING
5/8" GYP. WALLBD.	DONN D-H 945 METAL STUDS SYS."A", MOVABLE	22"O.C.		TL61-177	6.25	25	26	29	32	35	38	40	41	36	37	41	1961	34.5		
5/8" GYP. WALLBD.	DONN D-H 326 STUD TRACKS SYSTEM "B"			TL61-211	6.70	26	23	27	28	31	33	35	36	35	34	40	1961	31.6		33
5/8" GYP. WALLBD.	DONN DW-58 METAL STUDS	16"O.C.		TL61-208	7.0	32	32	38	40	43	44	49	51	46	45	51	1961	42.8		44
5/8" GYP. WALLBD.	DONN DH-326 STUD TRACKS SYSTEM "C"			TL61-212	6.4	22	20	23	22	25	27	29	30	31	31	37	1961	27.0		28
5/8" GYP. WALLBD. DOUBLE LAM.	DONN DW-58 METAL STUDS	16"O.C.		TL61-237	11.9	32	34	41	42	44	46	46	40	45	50	59	1961	43.5		40
5/8" GYP. WALLBD. DOUBLE LAM.	DON DH-445 METAL STUDS "TYPE A" MOVABLE	22"O.C.		TL61-238	12.0	32	34	39	39	43	43	44	42	41	46	52	1961	41.0		41
1/2" GYP. WALLBD.	DONN DW-48 METAL STUDS S-3"	24"O.C.	4"	TL62-18	4.55	26	27	33	37	40	44	47	48	50	42	40	1961	39.4		42
5/8" GYP. WALLBD. NON SYMMETRIC PARTITION	DONN DW-58 METAL STUDS	16"O.C.		TL62-19	8.9	34	35	39	41	43	45	45	45	46	46	53	1961	42.9		45
5/8" GYP. WALLBD.	DONN DW-26 METAL STUDS	24"O.C.		TL62-72	5.6	25	29	35	35	40	41	44	43	33	36	44	1961	36.3		35

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PARTITIONS

NESLO MANUFACTURING COMPANY

FACING ON BOTH SIDES-WALLBOARD	METAL FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL LB.PER SQ.FT.	FREQUENCIES (CPA) 125	175	250	350	500	700	1000	1400	2000	2800	4000	YEAR OF TEST	DB. AVER. 128 TO 4096	AVER. PLUS 5	CLASS RATING
						128	192	256	384	512	768	1024	1414	2048	2828	4096				
5/8" GYP. WALLBD. LAM. TO 3/8" LATH	SOULE 3 1/4" WELDED HOLLOWSTUD	16"o.c.	6 1/8"	G-H NES-1FT.	8.1	27	31	34	40	44	54	55	57	58	58	61	1961	47.1		
5/8" ETERNAWALL (4')	OLSON 3 5/8" Z STUDS STAGGERED JOINTS & G/F INSULATION	24"o.c.	4 7/8"	G-H NES-2FT.	7.0	30	34	41	45	46	44	43	43	51	47	49	1961	43.0		
5/8" ETERNAWALL (4')	OLSON 3 5/8" G/F Z STUDS STAGGERED JOINTS & 3" G/F INSULATION	24"o.c.	4 7/8"	G-H NES-4FT.	7.0	31	35	42	46	49	44	46	47	53	51	50	1961	45.0		
5/8" ETERNAWALL (2')	OLSON 3 5/8" Z STUDS 3" G/F INSULATION.	24"o.c.	4 7/8"	G-H NES-5FT.	7.[illegible]	32	36	38	43	46	45	46	47	53	58	49	1961	43.8		

BESTWALL CEILING TILE

INCOMBUSTIBLE 24 x 24			3/8"	GH-BW 11FT.	1.62	28	33	29	31	36	39	41	43	45	46	44	1962	37.7		
INCOMBUSTIBLE F/S-120 24 x 24			5/8"	GH-BW 10FT.	2.61	28	33	30	33	37	41	42	44	45	44	41	1962	38		

SOUND TRANSMISSION LOSS IN DECIBELS FOR INTERIOR PLASTER PARTITIONS

PLASTER	WOOD FRAMING	STUD SPACING	PANEL THICKNESS	TEST NUMBER	PANEL LB. PER SQ. FT.	FREQUENCIES (CPA) 125	175 250	350	500 700 1000	1414	2000	2828	4000	DB. YEAR OF TEST	AVER. 128 TO 4096	AVER PLUS 5
						128	192 256	384	512 768 1024		2048		4096			
3/8" LATH WITH CLIP PLUS 1/2" SANDED PLASTER	2" x 4"	16"o.c.	5 3/8"	BS-420	13.1	46	44 46	56	54 57 57		50		62	1949	52	
1/2" SANDED PLASTER OVER 3/8" GYPSUM LATH	2" x 4"	16"o.c.	5 1/8"	BS-148	15.2	33	28 31	35	39 44 46		49		66	1937	41	
SAME	2" x 4"	16"o.c.	5 1/8"	BS-239	14.2	—	— —	—	— — —		—		—	1956	45	
SAME	2" x 4"	16"o.c.	5 1/8"	TR56-12	13.2	—	— —	—	— — —		—		—	1966	44	
SAME	2" x 3" (STAGGERED)	(8"o.c.) (16"o.c.)	5 1/8"	BS-245	15.6	48	43 46	47	48 47 48		48		59	1957	49	54
1/2" SANDED PLASTER OVER GYPSUM LATH & THIN WHITE COAT	DONN 2 1/2" DS NAILABLE PARTITION STUD	16"o.c.	4 3/8"	TR-57-38 (DONN)	12.8	20.5	26.534.5	37.0	37.539.540.0		39.5		49.0	1957	36	
1/2" SANDED PLASTER OVER 3/8" GYPSUM LATH & FINISHED THIN WHITE COAT	DONN 3 5/8" DS NAILABLE PART. STUD	16"o.c.	5 3/8"	TR-57-40 (DONN)	12.5	21.5	29.036.0	38.5	38.040.542.5		39.5		49.5	1957	37	
1/2" SANDED PLASTER OVER 3/8" GYPSUM LATH - FINISNED THIN WHITE COAT	DONN 3 1/4" DS NAILABLE PART. STUD	16"o.c.	5.0"	TR-57-39 (DONN)	12.4	19.0	26.033.5	35.5	36.538.540.5		39.5		52.5	1957	36	
3/4" SANDED PLASTER OVER 3/8" 3.4 LB.EXP. METAL LATH FINISHED THIN WHITE COAT	DONN. 2 1/2" DS NAIL.STUD & 3/4" FURRING CHANNELS & RUBBER ISOLATION MOUNTS	16"o.c.	6"	TL-59-90 (DONN)	22.4	39.5	39.543.5	48.0	48.548.043.0	43.5	49.0	54.5	56.0	1959	46	
1/2" SANDED PLASTER OVER 3/8" GYPSUM LATH STAPLED TO STUDS. FINISHED THIN WHITE COAT		16"o.c.	6"	TL-91 (DONN)	13.0	36.0	39.043.0	48.5	49.049.550.0	48.0	45.5	52.0	55.0	1959	46	
5/8" SANDED PLASTER OVER 3/8" GYPSUM LATH STAPLED TO STUDS FINISHED THIN WHITE COAT			5 1/4"	TL-60-2 (DONN)	17.9	37.5	39.043.0	47.5	49.048.544.0	45.0	49.0	54.0	57.5	1959	46	