

January 24, 1974

TO: Mr. C. H. Kaman
FROM: Materials & Process Engineering - A. L. Belbruno
SUBJECT: Top Deflection History, Graphite #7

Graphite #7 - Two layers of birch veneer with grain at +30° from the transverse with one layer of longitudinal graphite fiber (Narmco Rigidite #5209 GSG) on each side. One layer of Plastilock 717 unsupported adhesive film, .03 pounds per square foot was used between the 2 layers of veneer and under each layer of graphite. Cure cycle was 260°F for 95 minutes under vacuum bag.

	THICK	WEIGHT	DEFLECTION		
			No Bridge		With Bridge
Graphite #7	.090	360 grams (.791 lbs) (12.8 oz)	2 lbs	.023	.011
	.095		4 lbs	.045	.023

K = .23 K = .11

NOTE: This panel was warped more than expected. Warpage was convex but the panel surface was flat when clamped in the checking fixture.

A. L. Belbruno
A. L. Belbruno

ALB/tm

cc: L. Pickett

February 13, 1974
February 26, 1974

TO: Mr. C. H. Kaman
FROM: Materials & Process Engineering - A. L. Belbruno
SUBJECT: Top Deflection History - Graphite #7

Graphite #7 top has 2 layers of veneer with grain at $\pm 30^\circ$ from the transverse. Thickness .090 inches.

		Deflection (inches/20 lbs)		
		<u>Strings Loose</u>	<u>Strings Tight</u>	
#7-0	2-12-74	.130		Bonded to bowl no bridge or bracing.
#7-0	2-13-74	.074		Bridge bonded. No bracing
#7-1	2-25-74	.049	.048	

cc: L. Pickett

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db
+20

UNIT NAME CARBON #7

TEST RECORD NO #7

E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D

+15

+10

+5

0

-5

-10

-15

-20

-25

-30

-35

-40

Hz

41.2

49.0

55.0

65.4

73.4

82.4

98.0

110.0

130.8

146.8

164.8

196.0

220.0

261.6

293.7

329.6

392.0

440.0

523.3

587.3

659.3

784.0

880.0

1046.5

1174.7

1318.5

1568.0

1760.0

2093.0

2349.3

2637.0

3136.0

3520.0

4186.0

4698.6

5274.0

6271.8

7040.0

8372.0

9397.2

OPERATING TECHNICIAN

DATE

OWATION INSTRUMENTS