

38

DATE

9-14-44

SUBJECT OF EXPT.

Newport Spring Design

65

Mat. @ D - .170

437

Thick. O.D. - .164

ASSUME MEAN DIA .141

.026

LEN 1.24 .380 EXTENDED LOAD 4"

13

LENGTH .348 COMPRESS LOAD

167

78

189

$$d^3 = \frac{2.55 P D}{S} = \frac{2.55 (4) .141}{90,000} = .00025$$

$$d = .029" \text{ USE } .028$$

Solid HT SAY 270 = 9 COILS ACTIVE

$$\frac{P}{F} = 36.2$$

$$F = \frac{4}{36.2} = .11$$

$$.380 + .110 = .490 \text{ FREE LENGTH}$$

$$4" \text{ LOAD } S = \frac{2.55 P D}{d^3} = \frac{2.55 (4) .139}{.000219} = 64,700 \text{ PSI}$$

$$5" \text{ LOAD} = 81,000 \text{ PSI}$$

$$6" \text{ LOAD} = 97,000 \text{ PSI}$$

EXPERIMENTER

DATE

WITNESS

DATE