SPREADER BAR

I.D. Nº 35 COLOR OF BAR: ALUMINUM

LOAD CAPACITY PAINTED ON BAR 2200 ~~TONS~~ LBS.

DATE CAP. & I.D. Nº PAINTED ON BAR 6-5-90 HC

DATE OF LAST LOAD TEST. 6-5-90 HC

(2) K Blocks

TEST LOAD WEIGHT 2700 ~~TONS~~ LBS

1250
1250
2500 10

TEST LOAD % 123%

Pb Bricks

STRESS CALCULATIONS:

DONE BY N. BOSEK 3687

DATE 5-15-90

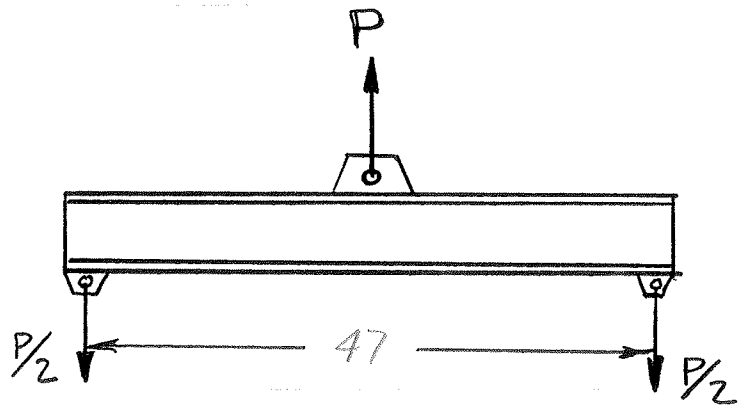
REMARKS:

BUR KECKER DID LOAD TEST.

PICTURES DUE FROM PHOTOGRAPHY IN A FEW DAYS

6-7-90 NB

SPREADER BAR Nº 35 PAINT COLOR _____



BEAM SIZE

$d =$ 4.25

$L =$ 47

$d/A_f =$ $4.25/.75 = 5.666$

$S_x =$ $\frac{6.713}{2.425} = 2.768$

$t_w =$ .75

$A_w = d \cdot t_w =$ 3

$M = \frac{PL}{4} =$ 11.75 P

$V = \frac{P}{2}$

BENDING STRESS:

$F_{b\ ALLOW} = 12{,}000$ psi

OR $F_{b\ ALLOW} = \frac{12 \times 10^6}{L \cdot d/A_f} = \frac{12 \times 10^6}{47 \times 5.666} =$ 45062

USE THE LEAST

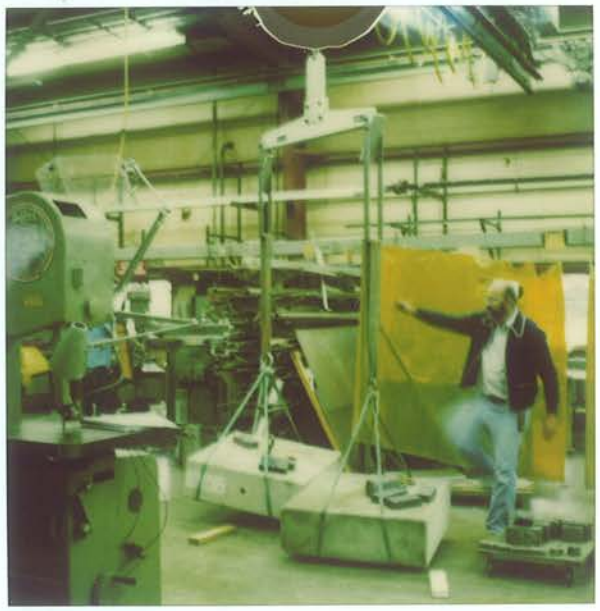
$\therefore f_{b\ MAX} = \frac{M}{S_x} = 12{,}000 = \frac{11.75P}{2.768}$ $P = 2826$ LBS.

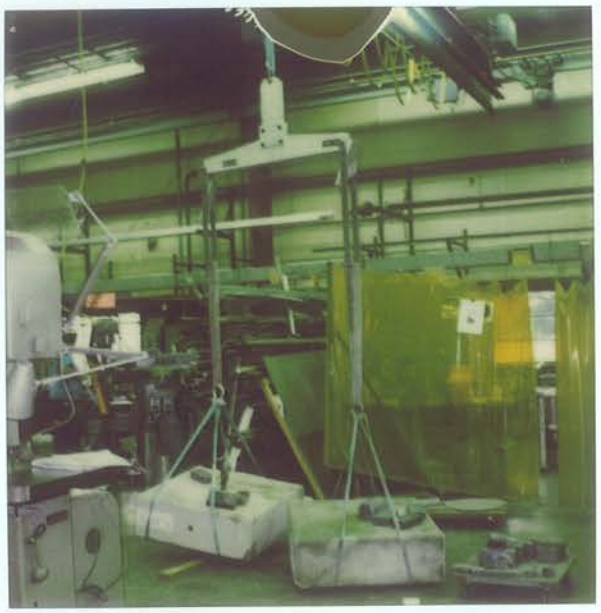
SHEAR STRESS:

$F_{V\ ALLOW} = \frac{.4\ F_y}{3} = 4800$ psi

$\therefore f_{V\ MAX} = \frac{V}{A_w} = 4800 = \frac{P}{2 \times 3}$ $P = 28800$ LBS

SUMMARY: $\therefore P =$ 28 LBS. TONS





90 – 883 6/5/90

Fermilab Photographs

EXPERIMENT #775- Spreader Bar with Load

90 – 884 6/5/90

Fermilab Photographs

EXPERIMENT #775- Spreader Bar with Load