

S.S. "PASS OF BALMAHA."

EX "EMPIRE DAMSEL." YARD N° 441.

PLAN OF NEW RUDDER.

SCALES: 1" = 1 FOOT & AS SHOWN.

$$3.5 \times 12.5 = 44 \frac{2.12}{93}$$

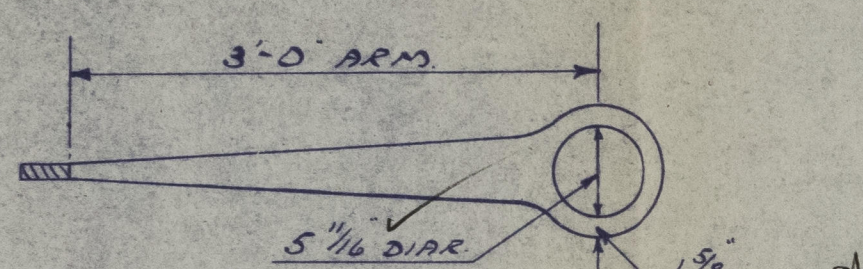
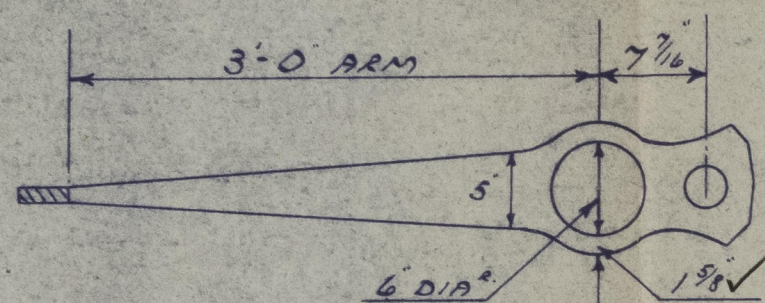
$$1.78 = 1.05 \frac{8}{8140}$$

$$d = 26 \sqrt{\frac{4 \times 48 \times 9.8^2}{2}} = 26 \sqrt{\frac{9200}{2}} = 26 \sqrt{4600} = 26 \times 67.82 = 1763.32$$

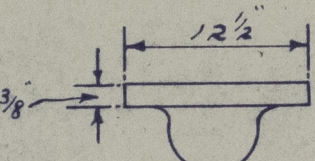
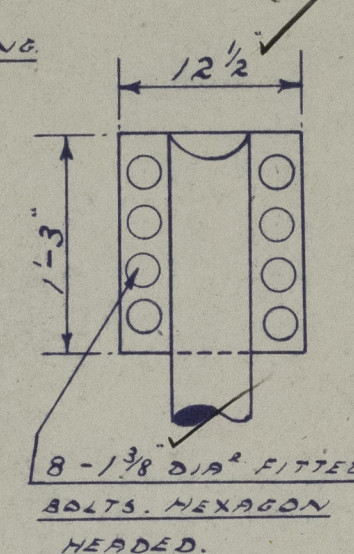
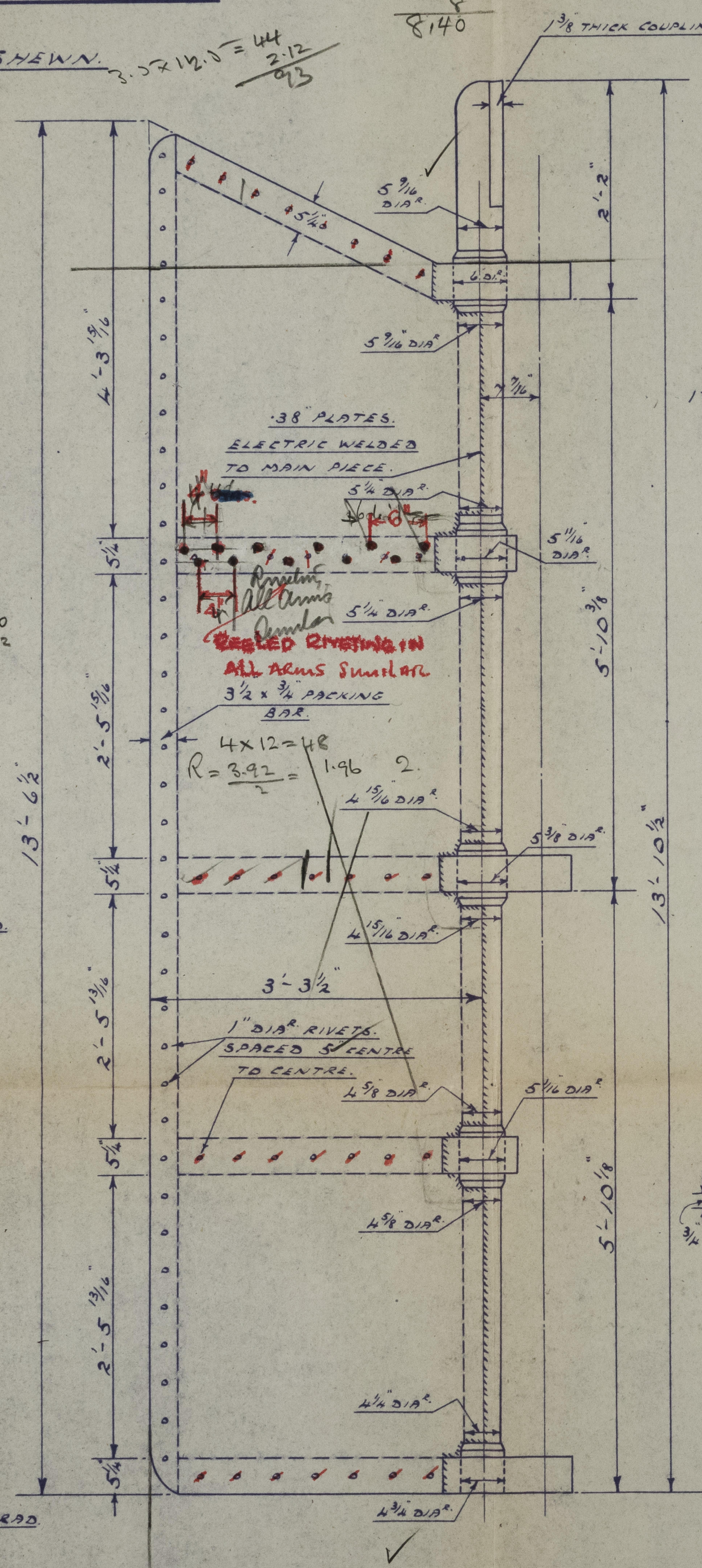
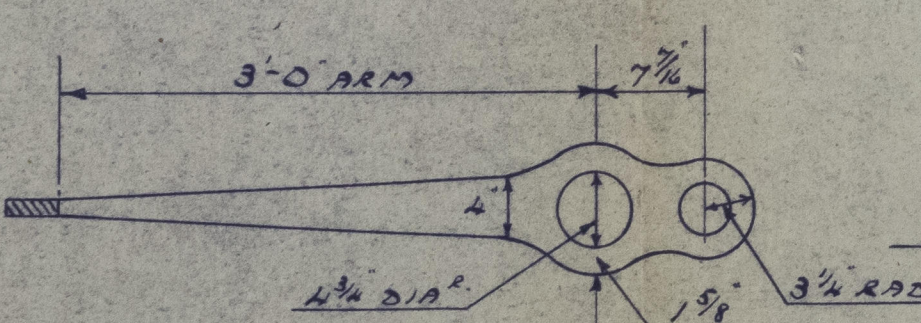
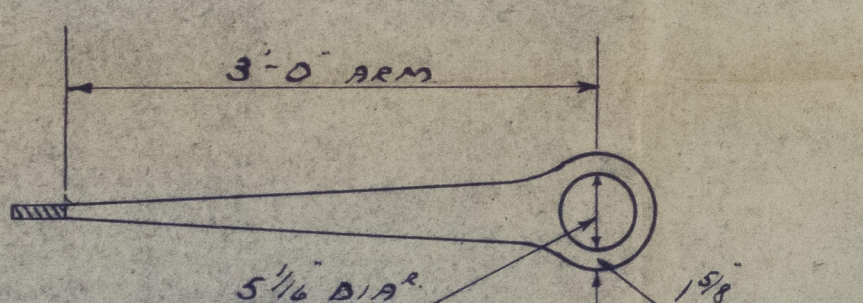
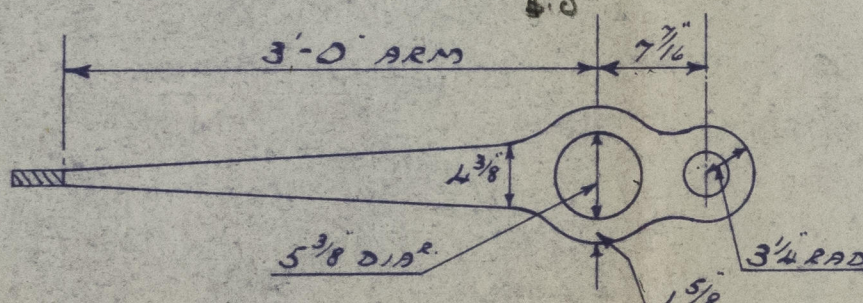
$$.33 \times 5.42^2 = .33 \times 29.5 = 9.7$$

checked.
23/11/48

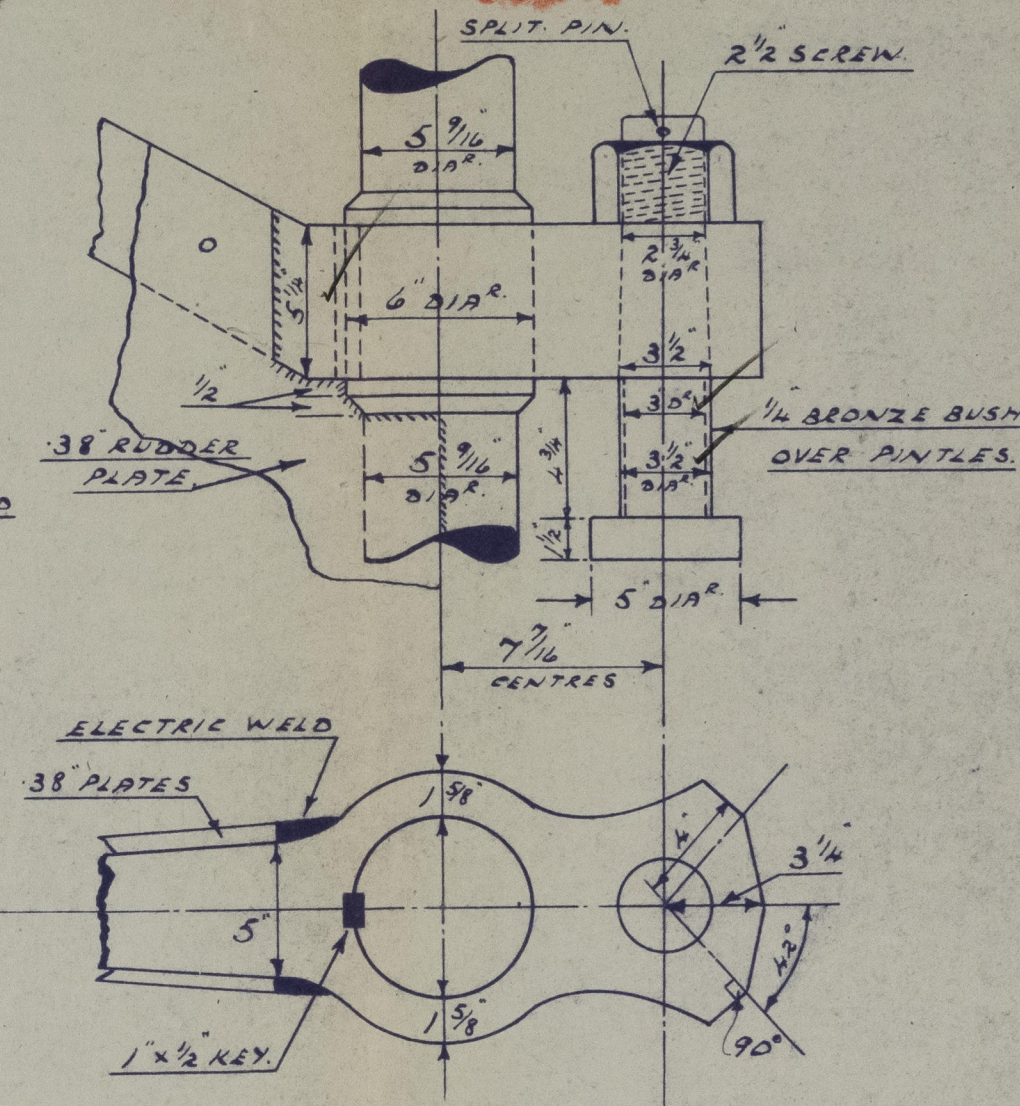
19 NOV 1948



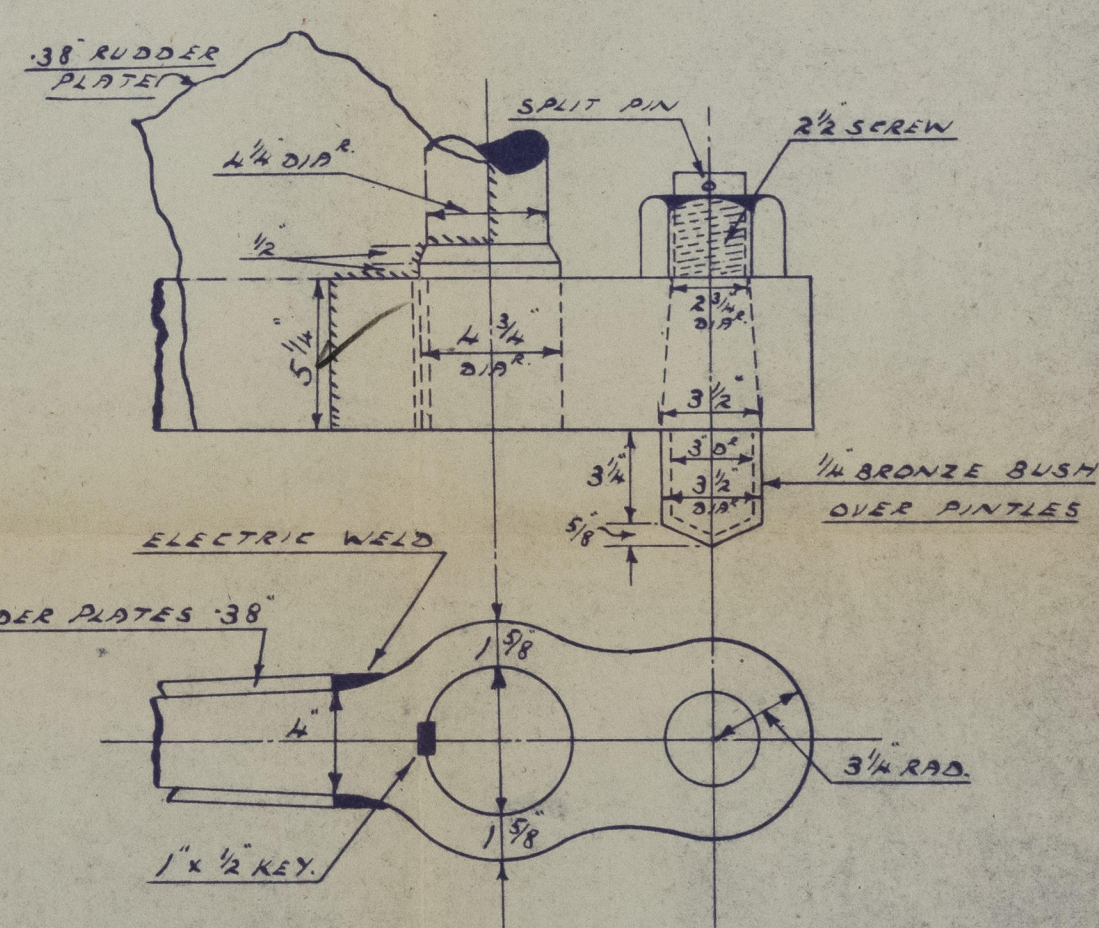
Given $3 \times 4 = 12$
 $M = .001 \times 12 \times 14.5 \times 9.8^2 = 166$
 $C = 1.1$
 $R = (1.5 \sqrt{166} + 1.1) = 3.8$



LENGTHS FROM GUDGEON TO GUDGEON
 ARE TAKEN FROM ORIGINAL STERNFRAME
 MADE BY T.S. FORSTER & SONS.

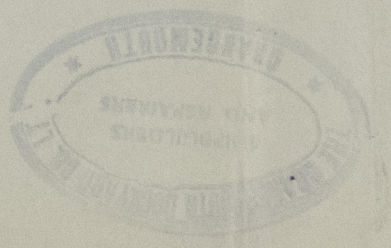


DETAIL OF TOP RUDDER
 ARM & HEAD PINTLE.
 SCALE: 2" = 1 FOOT.



DETAIL OF BOTTOM ARM
 & PINTLE.
 SCALE: 2" = 1 FOOT.

THE GRANGEMOUTH DOCKYARD COY. LTD.
 GRANGEMOUTH.

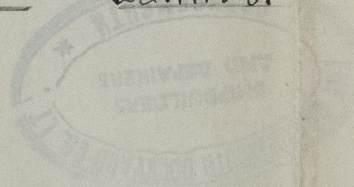


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Plan of New Rudder
Grangemouth Ltd No 4A1
S.S. PASS OF BALMAHA.

19 NOV 1948

New Rudder.
Grangemouth Ltd.
S.S. PASS OF BALMAHA. 22.11.48.



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