

AMENDMENTS.

SHEET No. 6.

Mississippi

Date.....

Dwg. No.....

OIL ENGINES - SHAFTING.

Shipbuilders

Yard No.

Engineers

Engine No.

Type of Engine

4 S. C. S. 17

Open Sea, or Smooth Water

No. of Screws

Main, or Auxiliary

B.H.P. 1000

M.E.P.

No. of Cyls.

6.

dia. 670

Stroke 39 3/8

Span 790 assumed

Maximum pressure

500

Flywheel, weight

dia.

R.P.M.

Propeller dia.

No. of liners fitted

Tube Shaft  
Screw Shaft

Tensile Strength

CRANKSHAFT.

Material

dia. =  $\sqrt[3]{D^2 \times (AS + BL)}$

Stroke

1000

Span

790

Coefficient

.089

Coefficient

.056

89.00

47.40

44.24

39.50

133.24

44.240

dia. =  $\frac{(main) 1.0}{(aux) .95} \sqrt[3]{670^2 \times 133.24}$

AS PER RULE AS PROPOSED.

391

Crank Webs.

Built h = .625 d

= .625 x 391

= 244.5

194

t =  $\sqrt{\frac{.12 \times d^3}{h}} = \sqrt{\frac{.12 \times 391^3}{244.5}}$

= 171.3

Solid, breadth = 1.33 d

= 1.33 x

thickness = 0.56 d

= 0.56 x

$\sqrt[3]{\frac{.12 \times 391^3}{194}} = 192.2$

Keys or Dowels, No. and Size

FLYWHEEL SHAFT.

Material

Tensile Strength

dia. =

INTERMEDIATE SHAFT.

Material

Tensile Strength

A =  $\frac{D^2 \times S (\times 5760 \text{ if } \frac{m}{in})}{W \times d^2 \times R^2}$

dia. =  $C \sqrt[3]{D^2 \times S}$

$\sqrt[3]{\quad \times \quad}$

by redraft rules

1000	790
.082	.064
82.00	316
50.56	474
132.56	5056

$\sqrt[3]{670^2 \times 132.56} = 390.3 \frac{m}{in}$

by redraft Rules taking a span of 728

1000	728
.082	.064
82	291.2
46.592	4368
128.592	46.592

$\sqrt[3]{670^2 \times 128.59} = 386.5$

Built h = 241.5

If the web were 225 thick (standard)  
thickness around eye holes



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AMENDMENTS.

THRUST SHAFT. Material

Tensile Strength

$$\text{dia.} = 1.05 d = 1.05 \times$$

AS PER RULE. AS PROPOSED.

TUBE SHAFT. Material

Tensile Strength

$$\text{dia.} = \left. \begin{array}{l} 1.05 d \\ 1.075 d \end{array} \right\} =$$

SCREW SHAFT. Material

Tensile Strength

$$\text{dia.} = d + \frac{P}{C} =$$

BRONZE LINERS.

Continuous liner is fitted  $\left\{ \begin{array}{l} \text{in one piece} \\ \text{with joints fused through whole thickness} \end{array} \right.$

$$t'' = \frac{d + 9.25}{32} \text{ or } t_m = \frac{d + 235}{32} =$$

$$\text{between bushes thickness} = .75t = .75 \times$$

STERN BUSH. Length =  $4d = 4 \times$

COUPLINGS.

$$\left. \begin{array}{l} \text{dia. of bolts} \\ \text{flange thickness} \end{array} \right\} = \sqrt{\frac{d^3}{3.5 \times n \times r}} = \sqrt{\frac{d^3}{3.5 \times \times \times}} =$$

$$\text{Screw Shaft Coupling, flange thickness} = .25 d = .25 \times$$

$$\text{Fillets, radius} = .125 d = .125 \times$$

SEPARATE COUPLINGS. Material

Tensile Strength

Provision made to resist astern pull

COPY OF APPROVED PLAN IS NOT  
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