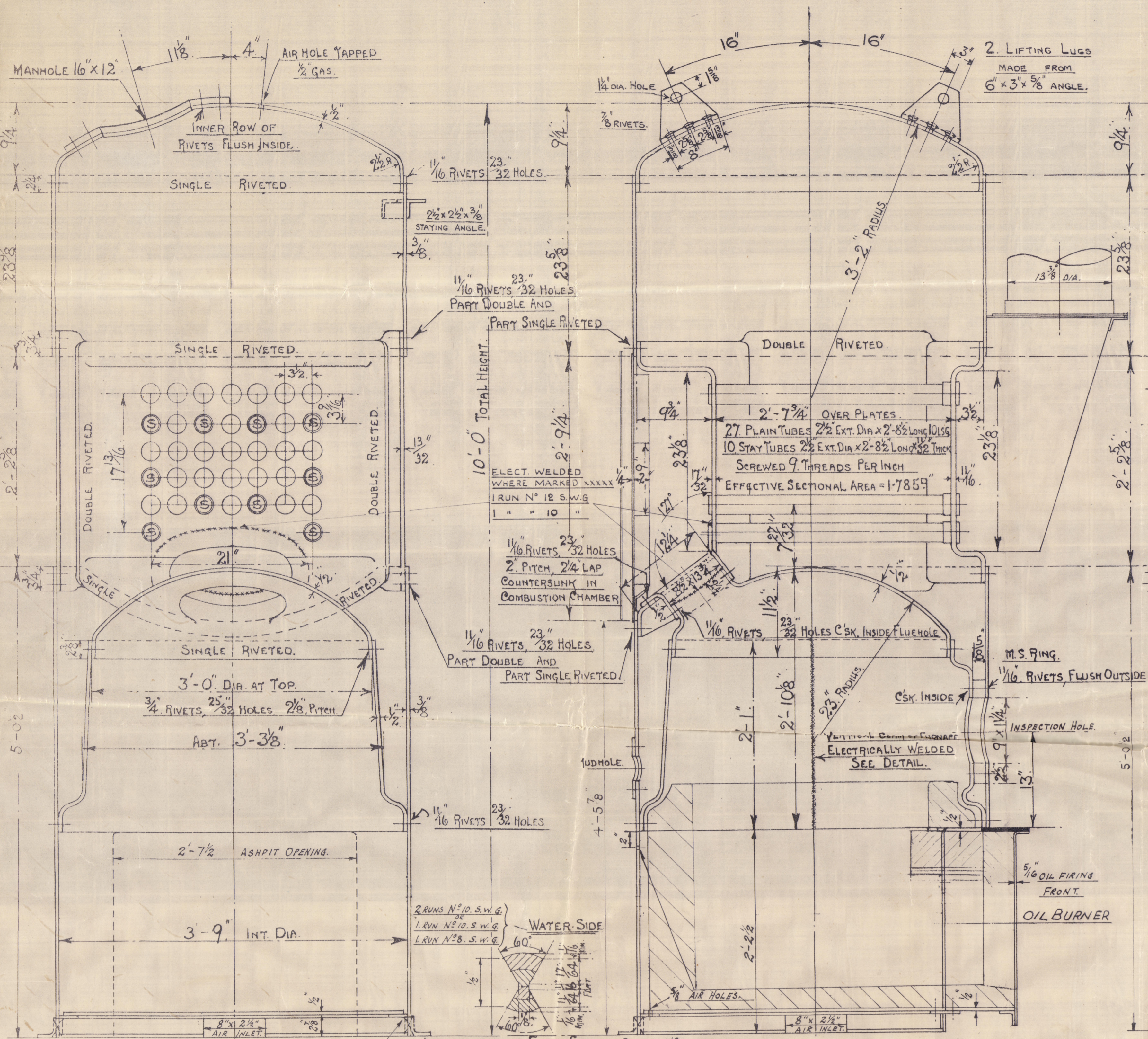
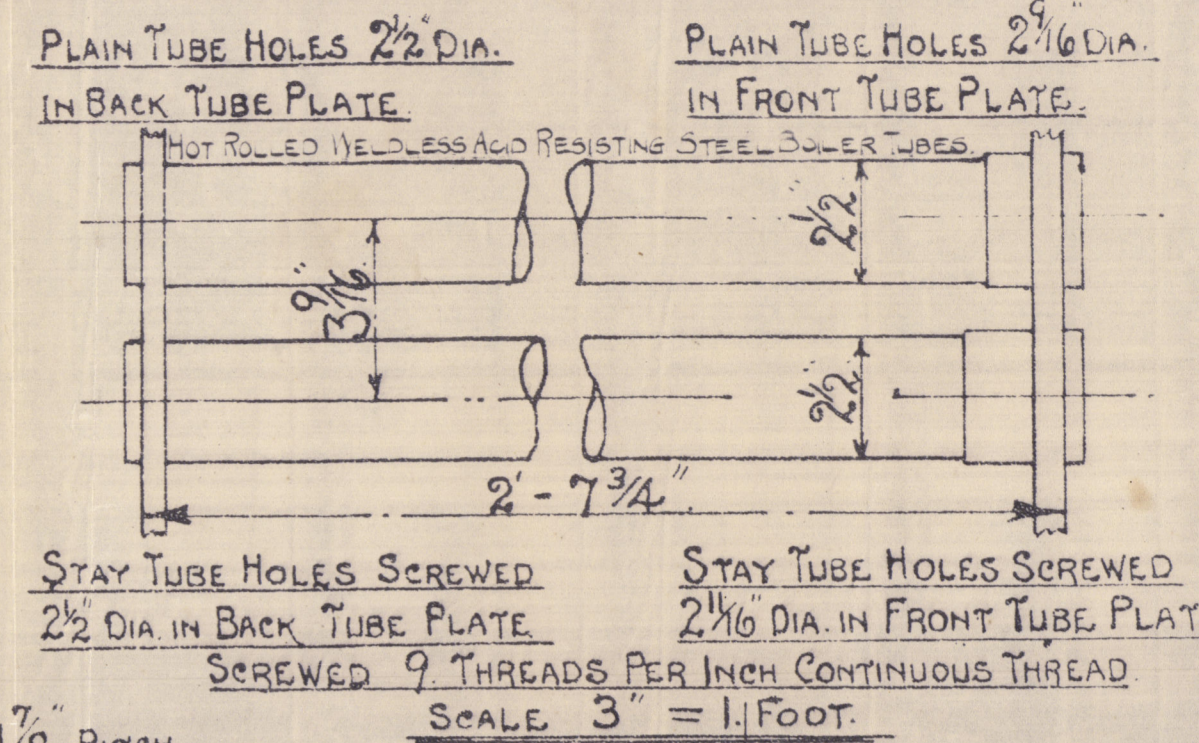
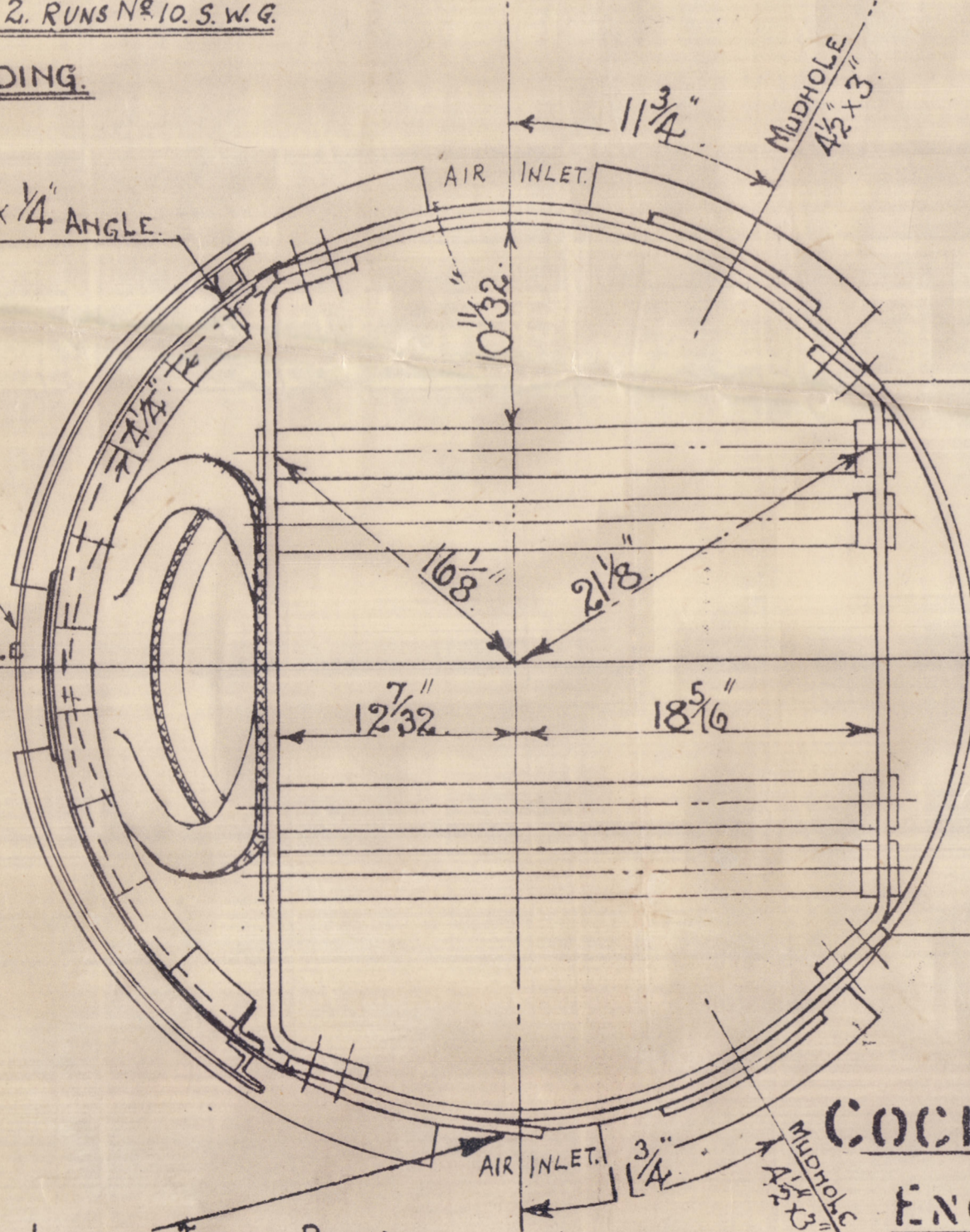
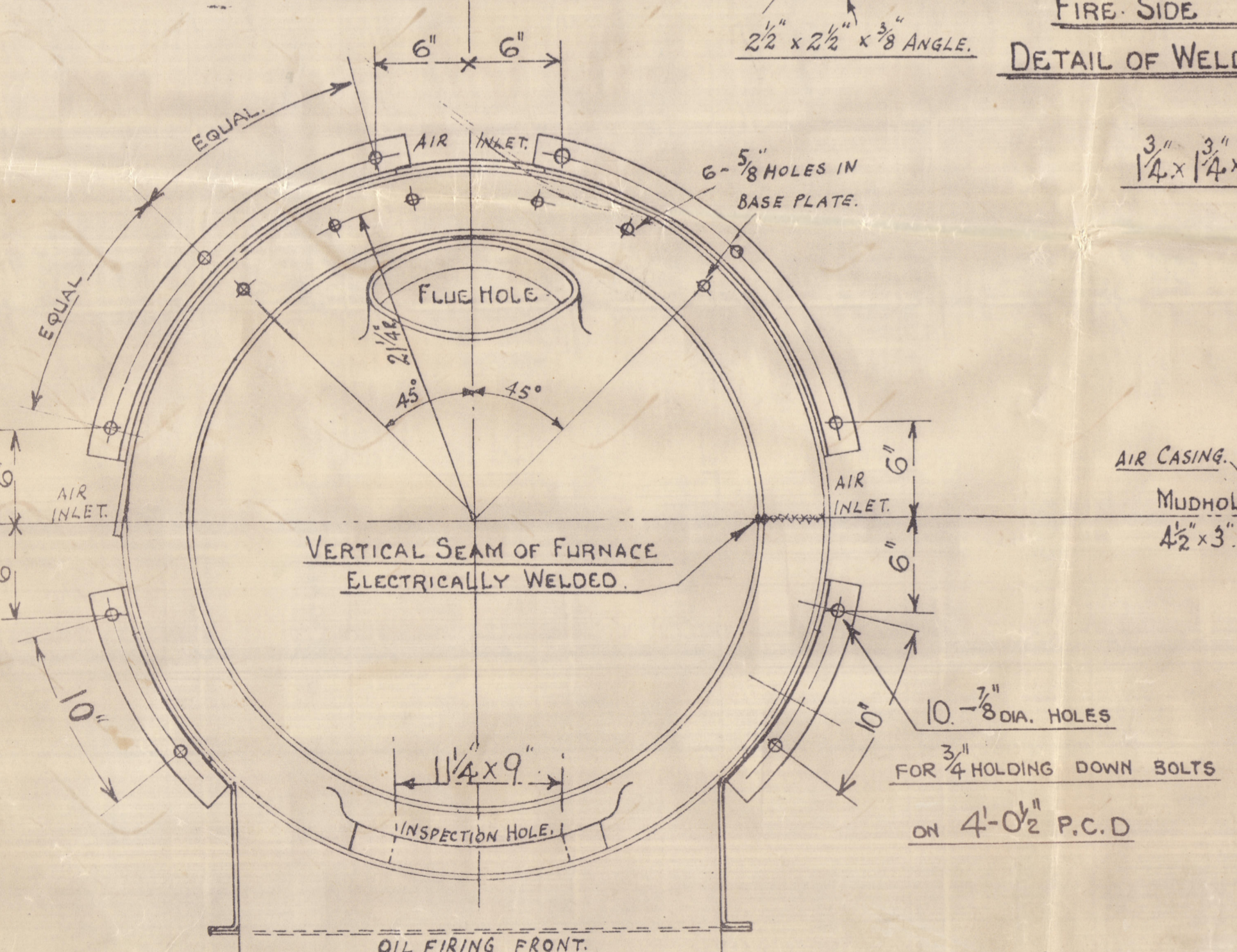
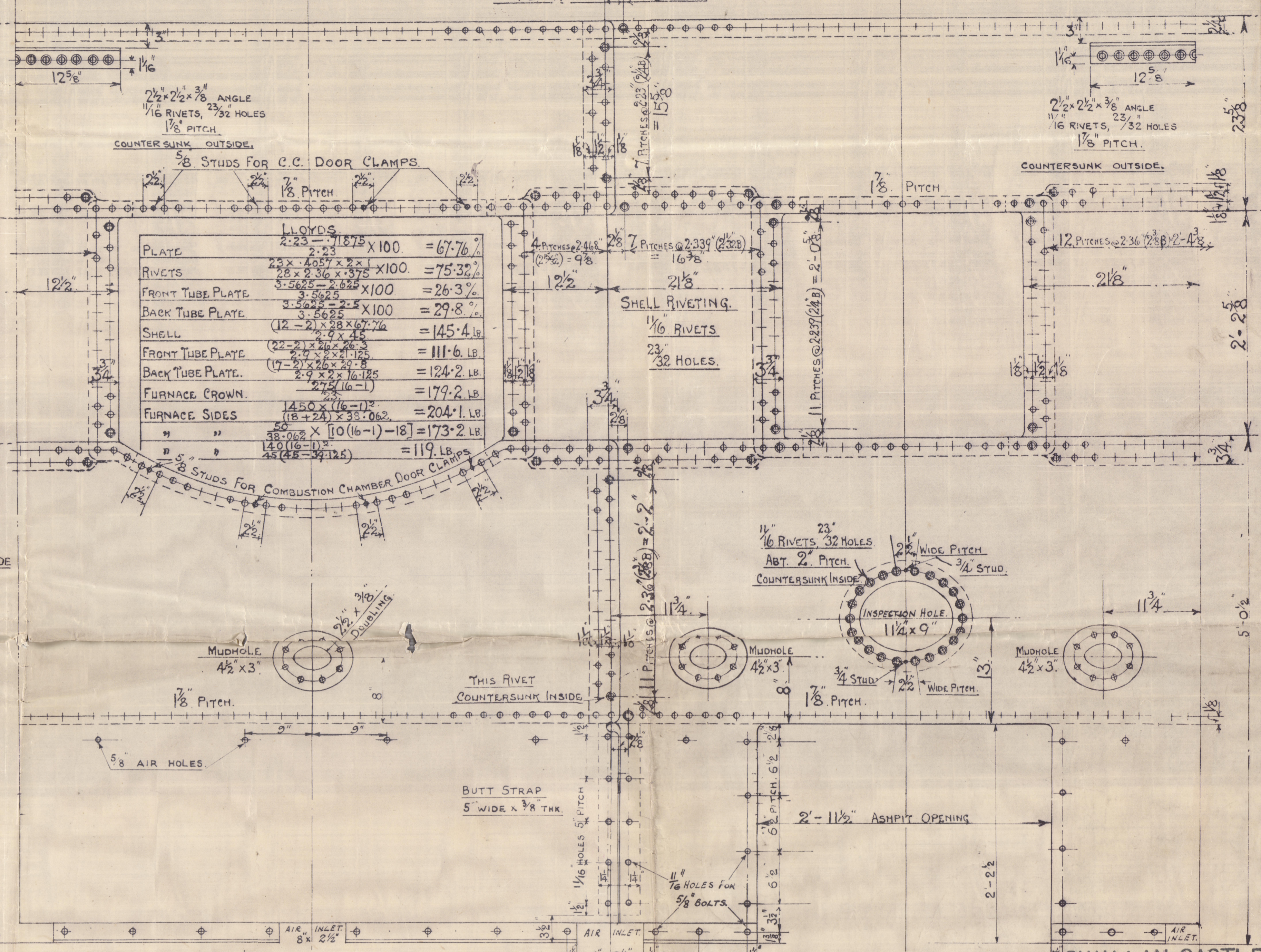


COCHRAN PATENT VERTICAL MULTITUBULAR BOILER

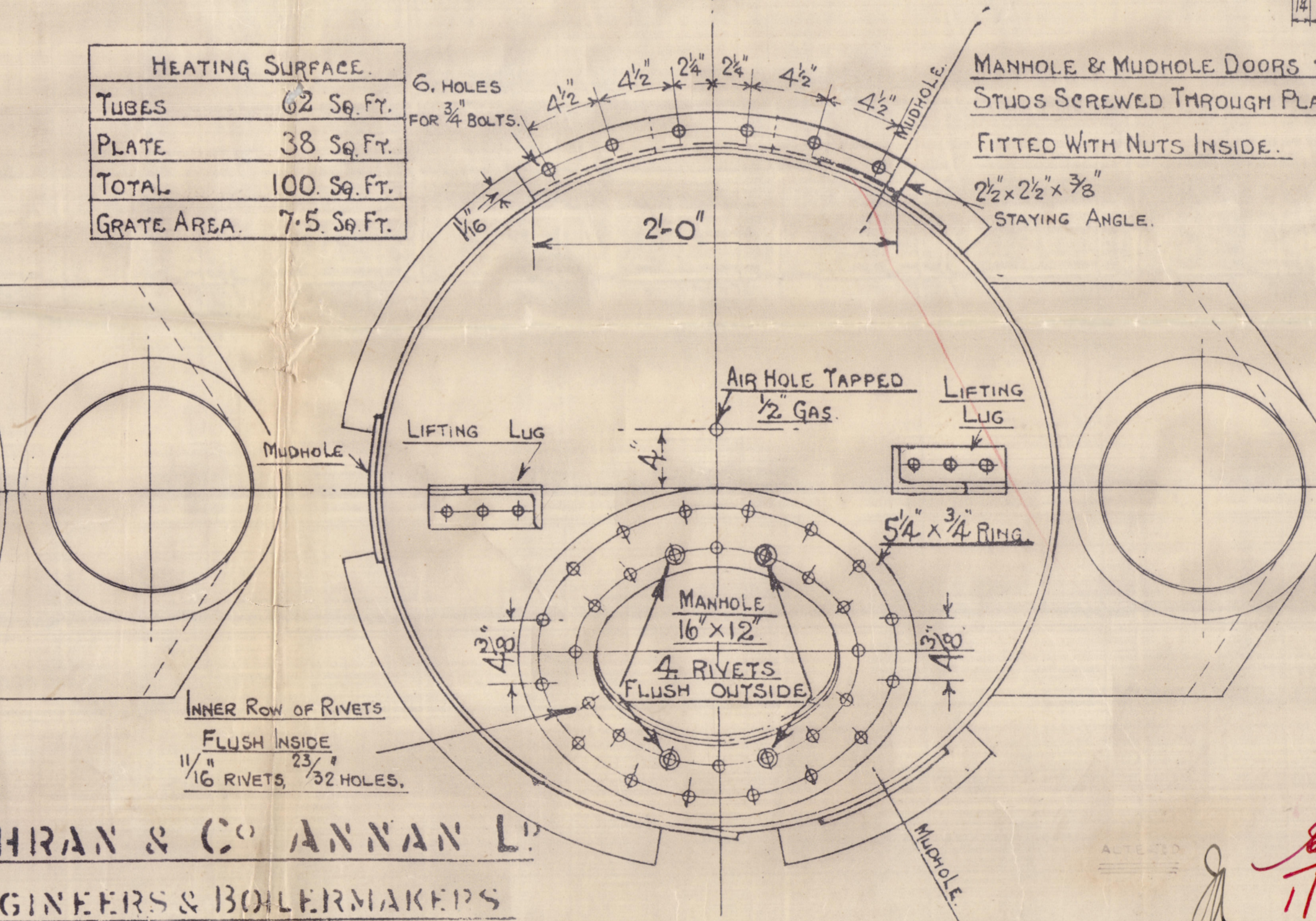
HORIZONTAL FLUE TUBES.



	WORDS	
PLATE	$2.23 - \frac{1}{2} 1875$	
RIVETS	$25 \times \frac{4057}{2} \times 2 \times 100$	$= 67.76\%$
FRONT TUBE PLATE	$28 \times 2 \times 36 \times 375$	$= 75.36\%$
BACK TUBE PLATE	$3.5625 - \frac{2}{2} 1875$	$= 26.3\%$
SHELL	$(12 - 2) \times 28 \times 67.76$	$= 145.4\%$
FRONT TUBE PLATE	$(22 - 2) \times 28 \times 26.3$	$= 111.6\%$
BACK TUBE PLATE	$(17 - 2) \times 28 \times 17.25$	$= 124.2\%$
FURNACE CROWN	$2.9 \times 28 \times 16.125$	$= 179.2\%$
FURNACE SIDES	$1.450 \times (16 - 1)$	$= 204.1\%$
"	$(18 + 2) \times 33.062$	$= 173.2\%$
"	$3.0 - 0.62 \times 10 (16 - 1)$	$= 173.2\%$
"	$4.0 (16 - 1)$	$= 119.1\%$



HEATING SURFACE.	
TUBES	62 Sq. Ft.
PLATE	38. Sq. Ft.
TOTAL	100. Sq. Ft.
GRATE AREA.	7.5 Sq. Ft.



EQUAL $\frac{1}{16}$ * HOWALLAN CASTLE
COCHRANE BEL, F. E. R. T. NO. 12635
BOILER. N.H.P. = 11
EVAPORATION FROM AND AT 212° F.
HEAVY STEAMING 840 LB. PER HOUR.
EASY STEAMING 650 LB. PER HOUR.

Similar to Dr. N^o 22249 approved 18/11/36 for
Ber. N^o 13429/30 but with Hot Rolled mild steel.
and Riveting steel. Boiler tubes 4 with Bottom Bolt
axle attachment in one plate.

HARLAND & WOLFF 1495 YARD Nos.
PATENT BOILER N^{OS} 1012/3
3'-9"_{Di} x 10'-0"_{High} x 100' *Howallan Castle* 4 H.S. x 100 L.B. W.P. 4

SCALE 1 1/2 INCH^{ES} TO 1. FOOT.

SIEMENS MARTIN MILD STEEL PLATES

TENSILE TESTS.

PLATES NOT EXPOSED TO FLAME OR FLANGED	28 TO 32 TONS
PLATES EXPOSED TO FLAME OR FLANGED & RIVETS	26 TO 30 TONS
ELECTRODES USED FOR WELDING TO BE QUASI ARC URANIUM	23371
ELECTRICALLY WELDED WHERE MARKED xxxxxx	22249

DRAWING NO. 207S2

W116-0098

SURVEY:- LLOYDS.

COCHRAN & CO ANNAN LTD
ENGINEERS & BOILERMAKERS
ANNAN, SCOTLAND.

ANNAN, SCOTLAND.