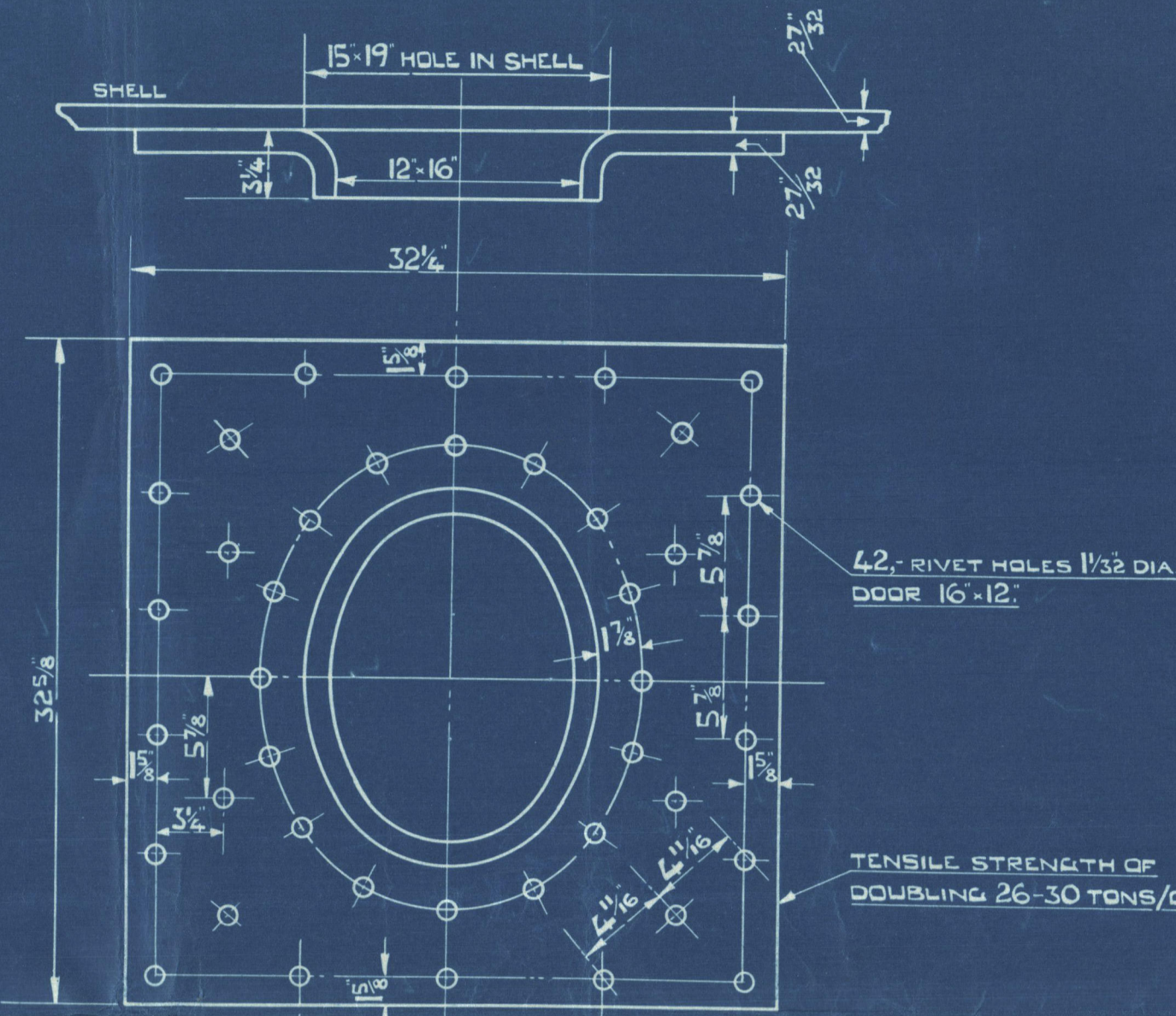


— GRATE SURFACE —

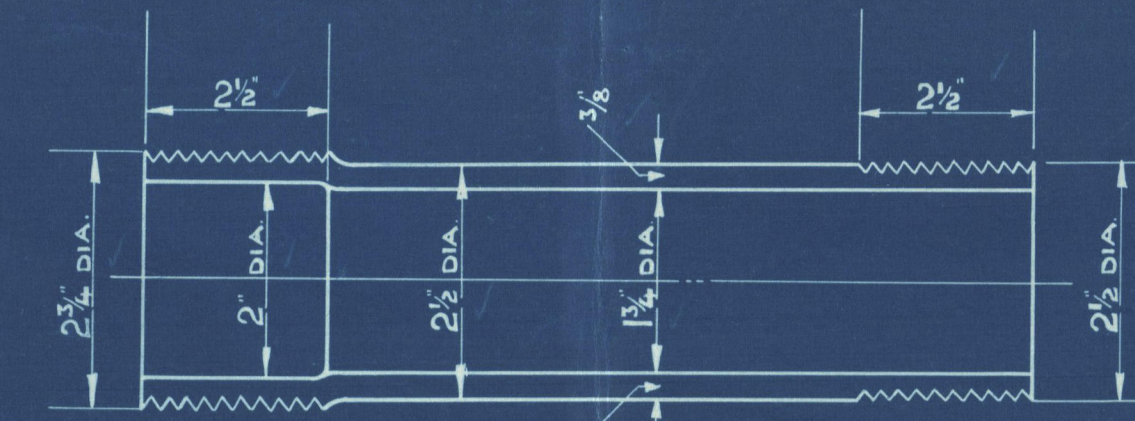
2 <sup>d</sup> FURNACES 41" INT. DIA 5' 3" BARS	— 36.7 SQ. FT.
TOTAL G.S. IN TWO BOILERS	— 73.4 SQ. FT.

RATIO	H.S.	=	1	T.S.	=	1
	G.S.		35.9	G.S.		28.8



TENSILE STRENGTH OF SHELL PLATES & BUTTSTRAPS	28 TO 32	TONS PER SQUARE INCH
" " " GIRDER PLATES	28 - 32	" " " "
" " " ALL OTHER PLATES	26 - 30	" " " "
" " " STEAM SPACE STAYS	28 - 32	" " " "
" " " SCREWED STAYS	26 - 30	" " " "
ALL HOLES TO BE DRILLED TO PLACE		

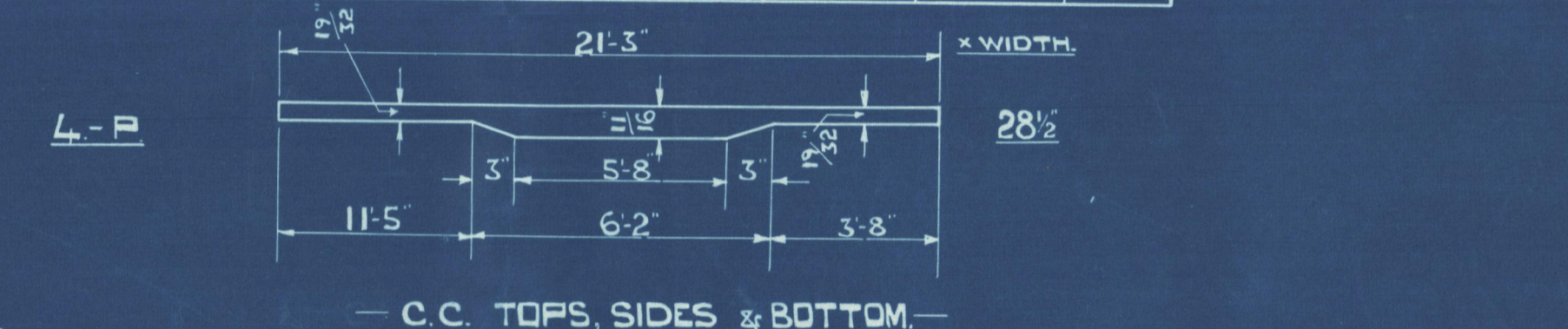


— STAY TUBES MARKED (E) —  
SCREWED 9 THDS. PER", EFF. AREA = 1.9605

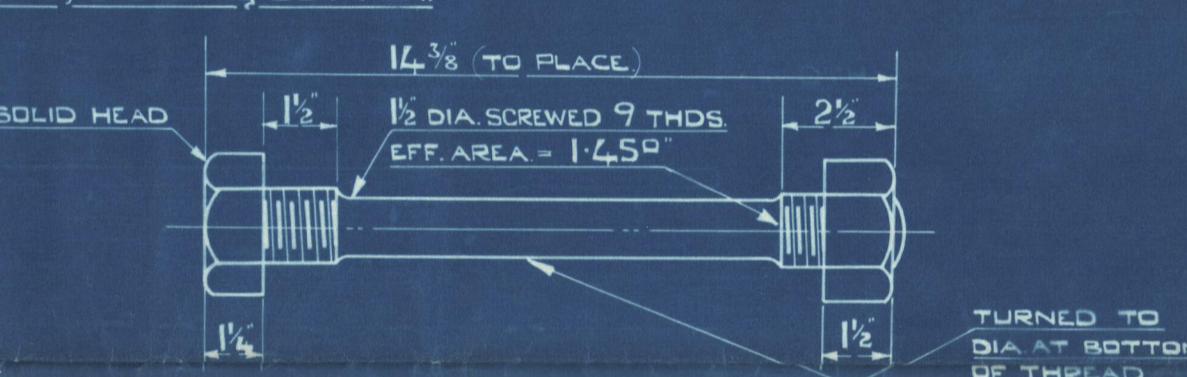


— STAY TUBES MARKED (S) —  
SCREWED 9 THDS. PER", EFF AREA = 1.6046<sup>2</sup>

STAY TUBES LAP WELDED WROT IRON



C.C. TOPS, SIDES &amp; BOTTOM

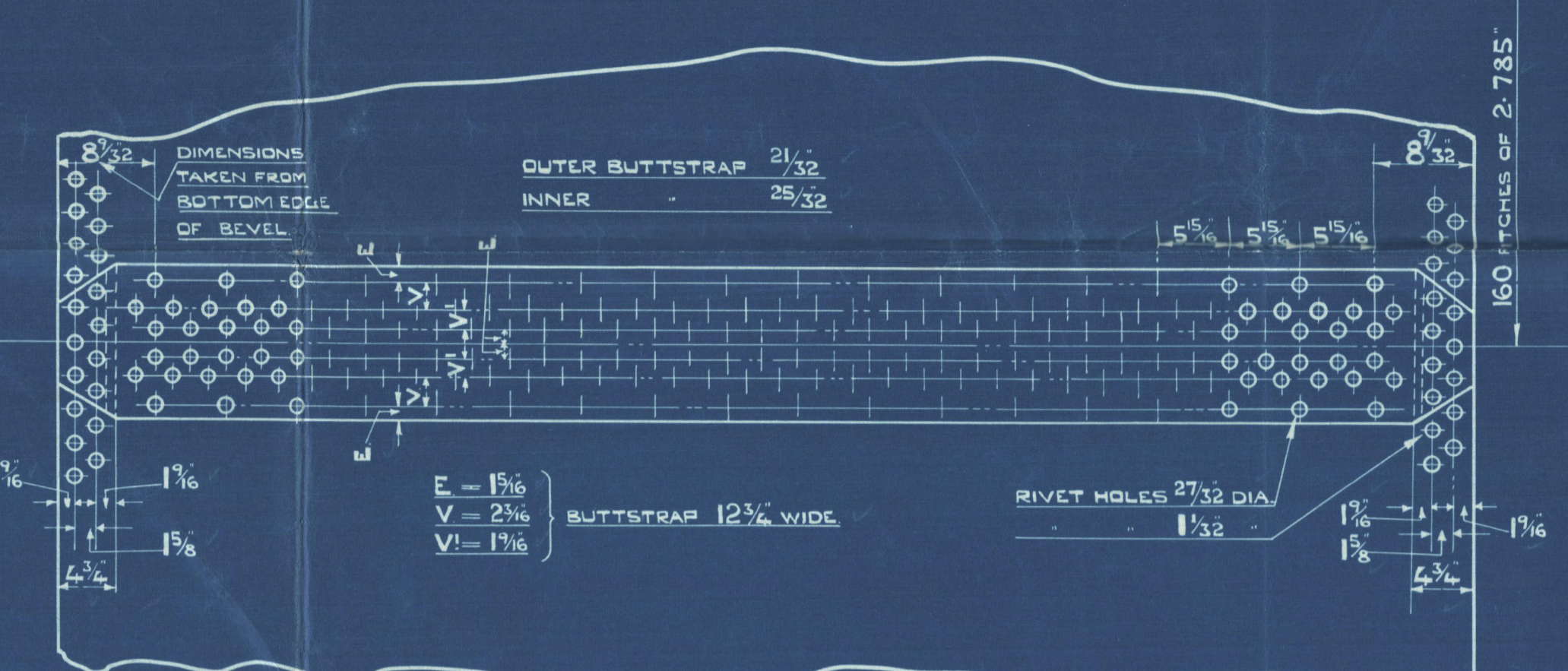
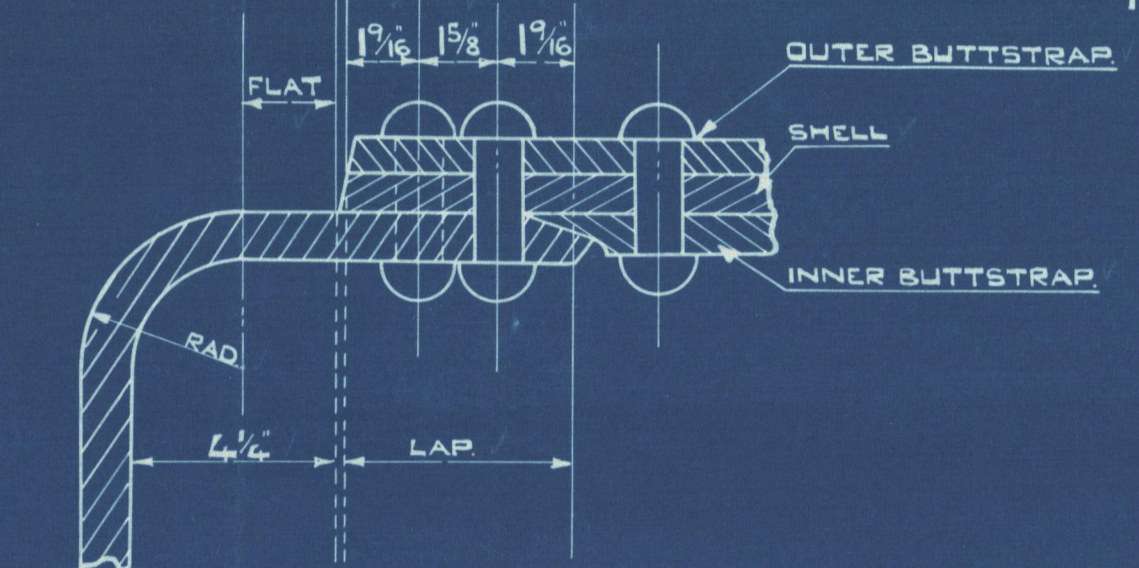


### DETAIL OF STAYS IN C.C. TOPS (STEEL

— STAY BAR LIST.—			
№	DESCRIPTION	LENGTH	DIA.
20	STEAM SPACE STAYS	11'-0"	2½"
2	WATER " "	11'-1½"	2½"
4	BREAST STAYS	7'-5"	2"
5	SCREWED " "	18'-0"	1¾"
3	" " "	18'-0"	1⅝"
20	" " "	18'-0"	1½"
3	HEX. 2½ <sub>32</sub> OVER FLATS	18'-0"	-

—STEAM SPACE STAYS—  
2 1/2 DIA 6 THDS PER INCH EFF AREA 4-1150 IN  
OUTSIDE NUTS 2 1/2 DEEP  
INSIDE " 1 1/2 "

ALL PLATES REVELLED TO THIS ANGLE



STEAM SPACE STAYS  
TO BE SCREWED INTO  
FRONT PLATE.

—STEEL STAYS ON C.C. BACKS—

STAYS MARKED	1 1/2" DIA.	9 THOS. EFF. AREA	= 2.031"	FITTED WITH NUTS EACH END
⊗	1 1/2"	9	"	"
⊗	1 1/2"	9	"	= 1.730"
⊗	1 1/2"	9	"	"
⊗	1 1/2"	9	"	= 1.450"
1 1/2" DIA. MARGINAL STAYS	FITTED WITH NUTS	EACH END	BOTH ENDS TO BE RIVETED	

2 1/2" DIA. STEEL STAY  
6 THOS EFF. AREA 4.110"  
DOUBLING 3/4" THICK.

— NOTE —

ALL SCREWED STAYS TO  
HAVE 1/8 DIA. HOLE DRILLED  
AT BOTH ENDS TO A DEPTH  
OF 1/4" INSIDE WATERSIDE OF PLATE

— BOILER SHELL CALCULATIONS —

PLATE %	=	$\frac{5.9375 - 84.375}{5.9375}$	=	85.8 %
RIVET %	=	$\frac{2300 \times 559.5 \times 1.875}{28 \times 5.9375 \times 84.375}$	=	85.8 %
W.P.	=	$\frac{27.2 \times 28 \times 85.8}{2.75 \times 14.1}$	=	154.8 LBS

SURVEY	Nº 518	Nº 519
PASSED LLOYD'S		
OWNER'S APPROVAL		
DUTCH GOVERNMENT		

—2.- BOILERS THUS.—

ALL MATERIAL STEEL EXCEPT TUBES WHICH ARE IRON.  
WORKING PRESSURE = 150 LBS  
HYDRAULIC TEST = 275 "

TO PASS LLOYD'S, & DUTCH  
GOVERNMENT SURVEY.

COST N°32



WORKMAN, CLARK (1928) LTD  
ENGINE DEPT BELFAST.

WORKMAN, CLARK (1928) LTD  
ENGINE DEPT BELFAST.

DRAWING NO 28349 DATE 18-6-30.  
DRAWN BY -  
CHECKED BY -  
TRACING CHECKED BY -

N<sup>os.</sup> 518-19.

# DONKEY BOILER

SCALE:- 1" = 1 FOOT.

Donkey Boilers

518. M/S "CONUS"



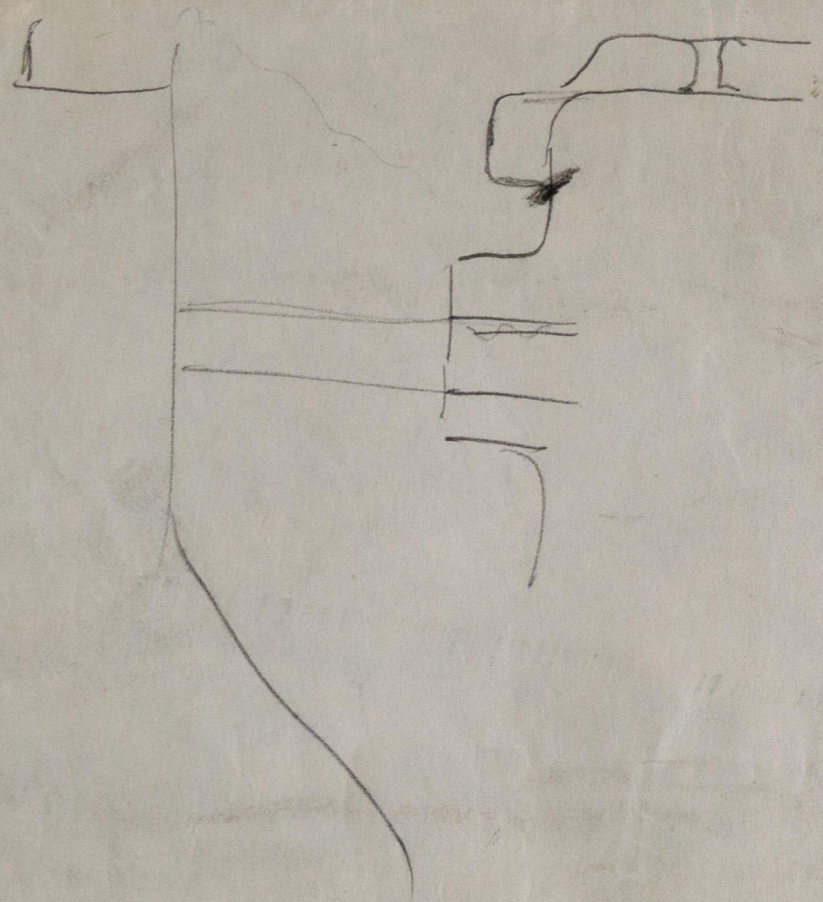
519. M/S "CORBIS" Bel. 10739.



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W235-0021



518-19.

Donkey Blr.



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