

C ODE: V-167 PACIFIC WINCHES
DATE: NOV. 1/83

PGRM: KARL STRAUSS

*** NAVAIDS AUX. WINCH ANALYSIS ***

LINEPULL RESULTS SHOWN IN:METRIC TONNES
LINESPEED RESULTS SHOWN IN: ... FEET/MINUTE
LENGTH RESULTS SHOWN IN: FEET

--- INPUT DATA ---				= PRIMARY DRIVE RESULTS =				== RESULTS PER LAYER - MAX PULL AT H.P. LIMITER OVER-RIDE. ==											
				** AT HP LIMITED STROKE **				** WINCH IN "FIRST GEAR." **											
CORE DIA.	24.00-IN.	WRAPS/LAY	23.08-WRAPS	LAYER NO.	-1-	-2-	-3-	-4-	-5-	-6-	-7-								
DR. WIDTH	24.00-IN.	MAX LAYER	4-LAYERS	REL. DIA.	25.04	27.12	29.20	31.28	33.36	35.44	37.52								
FLAN. HGT	7.00-IN.	MAX D.P.	2315.00-PSI	LEN/LAYER	151	164	176	189	202	214	227								
INST. HP	50-H.P.	US'BLE HP	47.35-H.P.	TOT. LENG	151	315	492	681	882	1096	1323								
CL. LAYER	2-LAYERS	POTEN. Q	55.77-GPM	L. PULL	5.42	5.00	4.64	4.34	4.07	3.83	3.61								
CABLE DIA.	1.04-IN.	LIMITED Q	29.57-GPM	L. SPEED	100.34	108.67	117.01	125.34	133.68	142.01	150.35								
# OF PUMP	1-PUMPS	MOT. TORQ	12455-FT/LBS	== MAX SPEED AT FULL STROKE, PRESSURE IS @ 1455.15 -PSI DP															
PUMP DISP	7.63-CI/REV	MOTOR RPM	15.31-RPM	** WINCH IN "FIRST GEAR." **															
PUMP RPM	1760-RPM	TOT. TORQ	12455-FT/LBS																
PUMP EF.V	.96-(%/100)	DRUM RPM	15.31-RPM	L. PULL	3.40	3.14	2.92	2.73	2.56	2.41	2.27								
SYS PRESS	2635-PSI	= PRIMARY DRIVE RESULTS =																	
CH. PRESS	320-PSI	** AT FULL PUMP STROKE **																	
# OF MOT.	1-MOTORS																		
MOT. EF.M	.98-(%/100)	MAX VOLUM	55.77-GPM																
MOT. EF.V	.93-(%/100)	DELTA PRE	1455.15-PSI																
MOT. DISP	415.00-CI/REV	MOT. TORQ	7829-FT/LBS																
TORQ/PSI	5.49-FT/LBS	MOTOR RPM	28.87-RPM																
TOT. RED.	1.00:1	TOT. TORQ	7829-FT/LBS																
RED. EFF.	1-(%/100)	DRUM RPM	28.87-RPM																
CH VOLUME	14-GPM																		
LBS/TON	2204-LBS																		
* NOTE * BASED ON 43-06800 MOTOR.																			

H.P. LIMITER LOGIC CALCS
(* BASED ON PRESS. *)

47.35-US'LE HP
29.57-THEORY Q
55.77-POTEN. Q
0
0
1
0
26

* NOTE * BASED ON 43-06800 MOTOR.

MAX HEAT GENERATED WITHIN THE SYSTEM							
SOURCE	H.POWER	BTU/MIN	PERCENT				
PUMPS	1.97	84	3.95 %				
MOTORS	3.56	151	7.13 %				
CH. PUMP	2.65	112	5.30 %				
MINIMUM OVERALL SYSTEM EFFICIENCY...				72.60 PERCENT.			
MAXIMUM OVERALL SYSTEM EFFICIENCY...				86.07 PERCENT.			