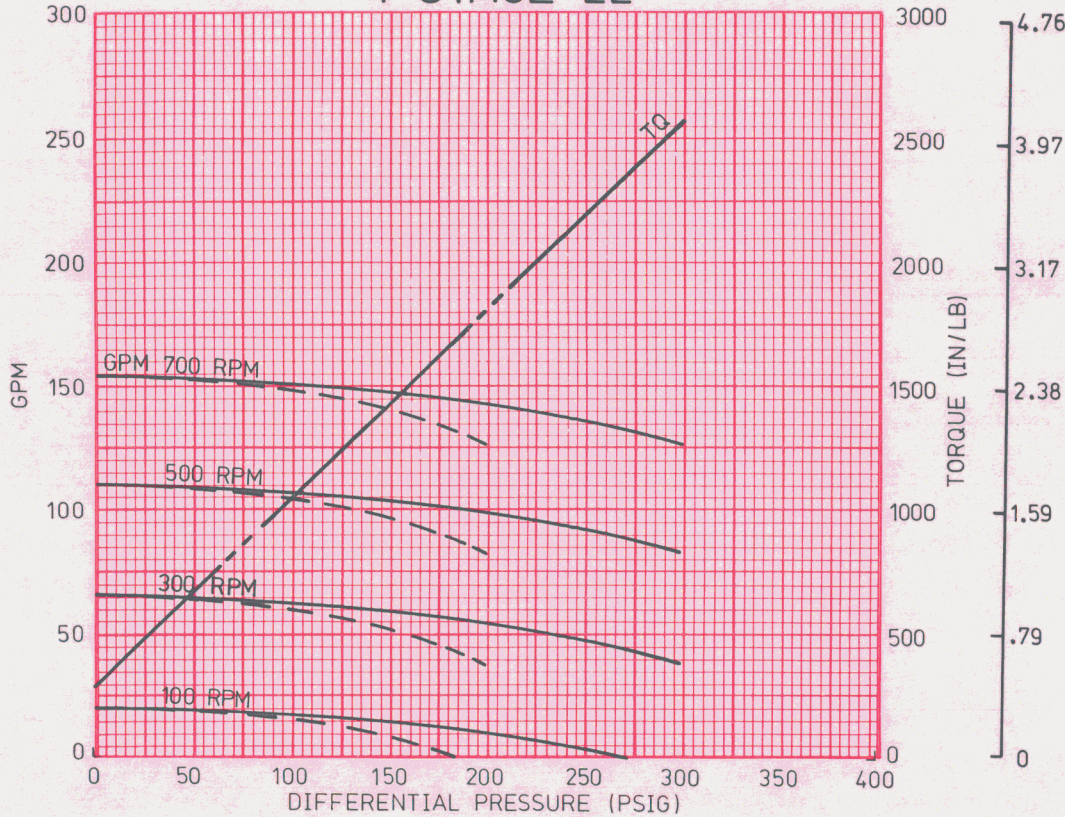


# 4 STAGE 22



RPM	NPSHR (FT)
100	1.0
300	2.7
500	5.4
700	9.7

STARTING TORQUE 1789 IN/LB  
 SEE GENERAL INSTRUCTIONS  
 CURVE BASED ON 70°F WATER  
 — 70 DUROMETER -- 50 DUROMETER  
 $HP = \frac{(TQ)(RPM)}{63025}$

TABLE A ABRASIVE CONDITIONS MAX. PRESSURE & SPEED

ABRASION	NONE	LIGHT	MEDIUM	HEAVY
MAX. PRESS	300	240	140	60
MAX. SPEED	600	500	350	175

TABLE B APPARENT VISCOSITY - TORQUE ADDITIVE (IN/LB) & MAX. SPEED

CPS	100	1000	2500	5000	10,000	50,000	100,000	150,000	200,000
TQ	378	1134	1765	2395	3277	7059	9832	11,786	13,487
RPM	600	600	600	600	320	80	40	30	25

TABLE C WATER BASE SLURRY TORQUE ADDITIVE (IN/LB)

NOTE: MAXIMUM PARTICLE SIZE .85 INCH

SIZE %	FINE .01" TO .04"	MEDIUM .04" TO .08"	COARSE .08" & LARGER
10	233	290	416
30	763	920	1336
50	1261	1513	2143

TABLE D STARTING TORQUE MULTIPLIERS (IN/LB) FOR TEMPERATURE

ROTOR °F	70	100	125	150	175	200	230	250	275	300	350
STD	1.0	1.1	1.3	1.6	1.8						
SGL U/S					1.1	1.3	1.6	1.8	2.0		
DBL U/S							1.0	1.1	1.3	1.6	1.8

- 1) DETERMINE WHICH TABLE (B OR C) APPLIES TO YOUR FLUID AND FIND THE APPROPRIATE CHARACTERISTICS. DETERMINE THE TORQUE ADDITIVE AND ADD IT TO THE TORQUE FOUND FOR WATER ON THE CURVE. IF YOUR FLUID IS A COMBINATION OF BOTH SLURRY AND VISCOUS MATERIAL. DETERMINE THE APPROPRIATE TORQUE ADDITIVE FROM BOTH TABLES AND ONLY USE THE GREATER OF THE TWO TO ADD TO THE TORQUE FOUND FOR WATER.
- 2) FIND THE FACTOR FROM TABLE D THAT CORRESPONDS TO THE TEMPERATURE OF YOUR FLUID AND STYLE OF ROTOR. MULTIPLY THE STARTING TORQUE SHOWN BY THIS FACTOR TO OBTAIN THE CORRECTED STARTING TORQUE.

COMPARE THE RESULTS FROM STEPS 1 AND 2. THE REQUIRED TORQUE WILL BE THE GREATER OF THE TWO.

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