VAS SELECTION PROCEDURE

A. Select pump size and number of stages from VAS curves. Record all data. Check bowl pressure limitations from Engineering Data Section (E.D.S.).

FROM CURVE:
(7) Size ____________ (8) No. Stages ____________
(10) K = ____________ (11) Bowl Efficiency ________%
(13) Curve No. ________

B. Record bowl assembly length and motor length. Record column length.

B.1. (14) Bowl Assembly Length ________________________ In.
B.2. (15) Motor Length ________________________________
B.3. (6) Column Length ________________________________
B.4. (16) T.P.L. = (14) + (15) + (6) = ________________

C. Column Friction Loss: Select column size from chart, using the non-shaded figures for the selection. Determine friction loss and record.

C.1. (17) Column ____________________________ In.
C.2. (18) Column Friction Loss ____________________ Ft.
C.4. (20) Total Friction Loss = (18) + (19) = ________________ Ft.

D. Add (20) and (2) to obtain Total Pump Head (TDH) and record.

D.1. (21) T.P.H. = (2) + (20) = ________________________ Ft.

E. Refer to pump curves and make the final pump selection with TPH (21). Record data (13A)(10A)(11A).

E.1. (11A) Final Bowl Efficiency ____________________ %
E.2. (8A) Final No. of Stages _______________________
E.3. (9A) Final Imp. Dia. __________________________
F. Calculate final BHP with TPH (21) and Bowl Efficiency (11).

\[
\text{HP (22)} = \frac{\text{GPM (1)} \times \text{TPH (21)} \times \text{Sp. Gr. (3)}}{3960 \times \text{Efficiency (11A)}}
\]

(22) Pump BHP ______________ 
(22A) Maximum BHP ______________

Note: To calculate maximum BHP (22A), determine the capacity at which HP curve (based on required trim) peaks on performance curve.

Calculate maximum BHP based on this GPM, the associated Head and Efficiency. Calculate maximum BHP (non-overloading) if required. (22A)


(23) Total Thrust (T) = K (10) x TPH (21) x Sp. Gr. (3)

H. Select the proper cable size from the Cable Selection Chart.

(24) Cable Size ______________

Note: Overall Efficiency = \( \frac{\text{GPM (1)} \times \text{TPH (21)} \times \text{Sp. Gr. (3)}}{3960 \times \text{BHP}} \) x Motor Efficiency

K. Enter all data on TD Estimate Sheet and Quotation Form. Price pump and all auxiliary items from price book. Check to see that discharge pressure does not exceed column and discharge elbow ratings. Note: Flow of fluid between well casing and motor O.D. must be at least 1 ft./sec. at 85° F. If flow is slower or temperature is higher, contact the factory for derating of motor HP.