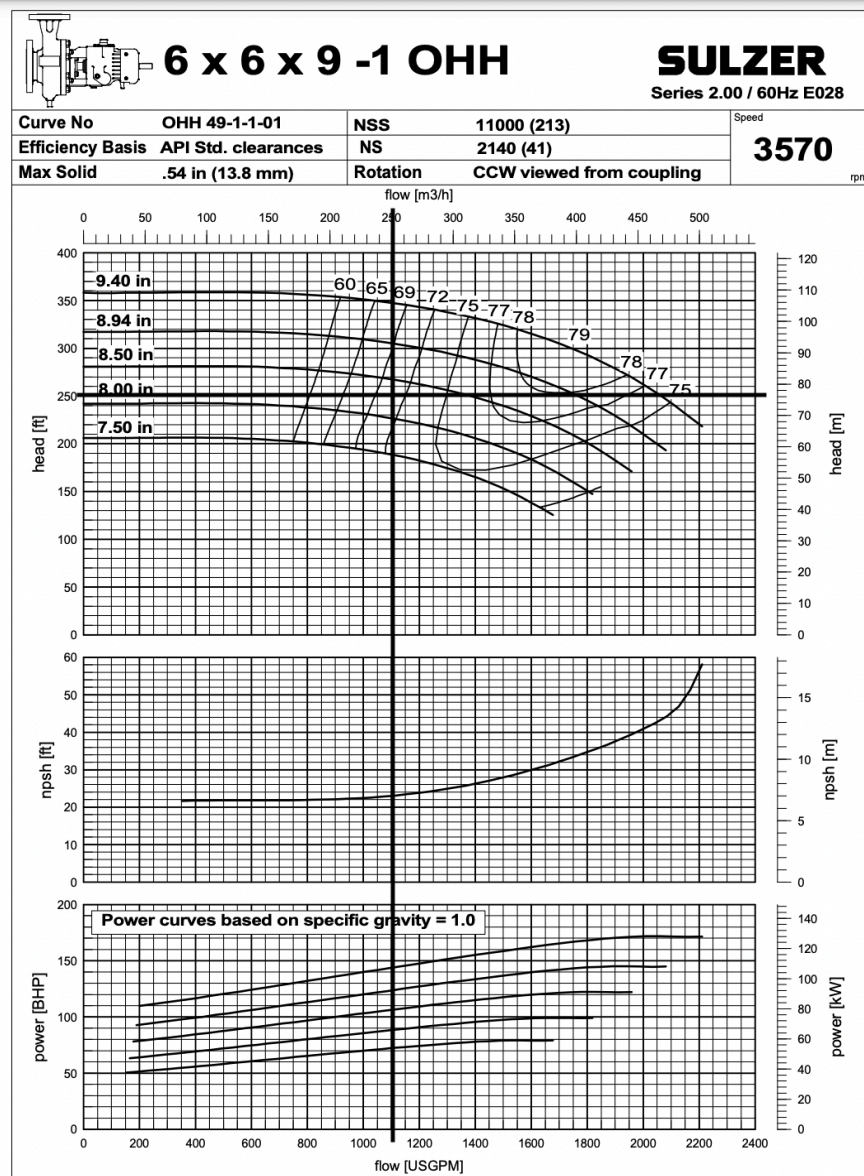


Calculations



Summary

- I. The pump suction, discharge, and impeller size is 6 x 6 x 9.
- II. The approximated required impeller diameter is 8.3 in.
- III. The approximated power is 100 BHP and efficiency is 67%
- IV. The actual pump size is 36 in and weight is 680 lbs
- V. Yes, the 60% was an accurate assumption

Materials

- Water at 60F
- selected pump
- 10-in schedule 40 steel pipe

Analysis

A kinetic pump is required instead of a positive displacement pump because it offers flexibility in handling variable flow rates, requires less maintenance, and is more efficient for large-volume, low-pressure fluid movement. A radial pump is the best choice for this system because it uses centrifugal force to move fluid efficiently, has a simple design, is cost effective, and can adapt to changing flow demands.