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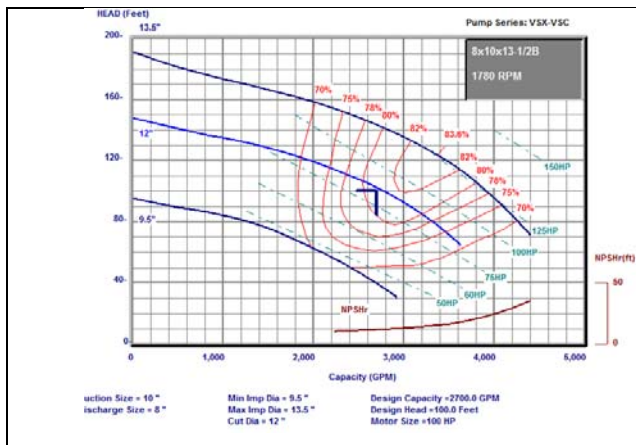
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January 10th 2011 ~ Monday Morning Minutes:

Centrifugal Pump Selection Specifying Future Conditions

In the last R. L. Deppmann Monday Morning Minutes, we suggested a specification that would allow a future impeller change as a means of adding some safety factor to the pump provided on your project. **What happens if you want to select a pump with a present and future condition?**



Here is a good pump selection for a capacity of 2700 GPM at 100 foot head using a 100 HP 1750 RPM motor.

Let's assume you want to be able to increase the capacity to 3000 GPM at 130 foot head in the future.

There are two possible solutions using this pump. 1. Install this pump now with a 100 HP motor and 12" impeller and change the motor and impeller in the future. 2. Install the pump now with a 13.5" impeller and 125 HP motor and use a variable speed drive to reduce the maximum speed for the current condition.

Option number one would be advantageous if you are not running the current pump on a variable speed drive or if the future condition will not occur for a long time or may never occur. One thing many engineers are not aware of is that although the pump curve in our example can handle up to 150 HP, the change from 100 HP to 150 HP may require a different base, coupler & accessories. **A new base requires the pump be removed and involves piping modifications!** If you expect to increase the pump capacity in the future, I would recommend a note on the schedule identifying future capacities and the requirement for the pump to be able to handle the change without removal of the pump. Your note could read; *"This pump will have a future requirement of 3000 GPM at 130 foot head with a future 150 HP motor. The pump must be supplied with the proper base and trim so the future condition can be met without removing the pump from the piping connections"*.

The second option makes sense if you know the future capacity will occur in a short time frame or if the current pump is operating with a variable speed drive. In this case, schedule the future conditions and larger horsepower and use a variable speed drive to "reduce" the impeller in the present condition. The schedule note would read, *"Mechanical contractor is responsible to adjust the maximum speed within the drive to meet the current condition of 2700 GPM at 100 feet"*



4 REASONS WHY YOU SPECIFY... VSX DOUBLE SUCTION PUMPS



The impeller in the VSX series pump comes standard with a "Low Zinc Silicon Bronze ASTM 876" vs. the traditional ASTM 875 used by other suppliers.

Our low zinc design provides the owner with less wear than other manufacturers when chlorinated water is present.

Speaking of impellers, the B&G VSX impeller is factory balanced to ANSI G6.3 grade with even tighter tolerances available if required.

The casing and cover plate are standard with ASTM A159 cast iron which has a superior tensile strength to standard materials.



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