

Robertson Technology Pty Ltd

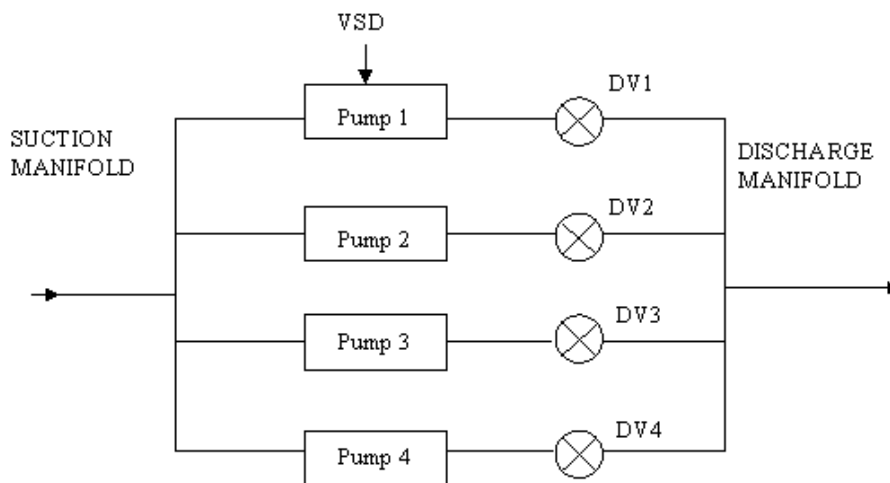
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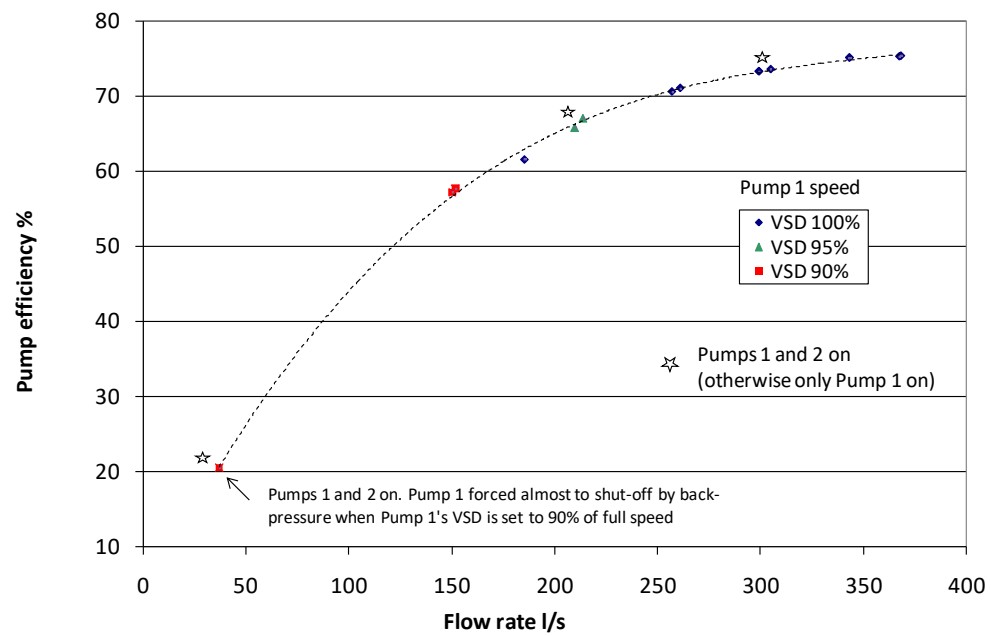
Downside of operating both fixed and variable speed pumps in parallel

We sometimes see pump systems like that below. Pump 1 has a variable speed drive (VSD), the other pumps in parallel are fixed speed.



For energy efficient operation, either operate Pump 1 on its' own, or with the speed set so that it matches the characteristics of the other operational pumps (our Micro Station Analyzer can advise the exact speed).

Lowering the speed of the Pump 1 with other pumps in parallel can result in major losses in efficiency. At 90% speed, with just one fixed speed pump in parallel, Pump 1 could be forced almost to shut-off! See the graph below. Pump 1 is reduced to 20% efficiency.



For most applications, rather have all fixed speed or all variable speed pumps.