

PROCESS OF OPTIMIZATION OF IRRIGATION SYSTEMS

AREA OF EXPERTISE

JOAT has expanded extensively into the control and optimisation in agricultural applications. The success of this expansion has come from having an intricate knowledge and understanding of the total process requirement and how to manipulate the system to be most effective.

The use of Variable Speed Drives in agriculture has revolutionised how irrigation is dealt with, whether it be the abstraction of water from a river or dam, distribution through pump and booster pump stations or the control of motorised field equipment. JOAT has a unique offering which provides a complete control solution not only with the use of VSDs but with added control instrumentation or measurement products.

The process requirement is always variable according to the rainfall equivalent requirement of the crop, lay of the land, soil types and ambient weather conditions. With the ever changing climate, both financial and meteorological, It is imperative that the “old way of thinking” is discarded and technology is embraced in order to keep the process sustainable.

The requirement may be :

- A reduction in energy usage
- An increase in crop yield
- A reduction in maintenance operations ie. reactive maintenance due to breakdowns
- Planned maintenance scheduling
- Power generation
- System design
- Input power to output flow ratios

JOAT already has many proven test cases in which considerable savings have been achieved in and outside of South Africa.

Measurable returns on capital investment to upgrade to VSD control more than meets recognised norms.



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