Record Nr. UNINA9910784017203321 **Titolo** Variable speed pumping [[electronic resource]]: a guide to successful applications / / Europump and Hydraulic Institute Pubbl/distr/stampa Kidlington, Oxford, UK; New York, : Elsevier, c2004 **ISBN** 1-281-03549-1 9786611035495 0-08-052046-4 Descrizione fisica 1 online resource (185 p.) Disciplina 621.6/9 Soggetti Pumping machinery Variable speed drives Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di contenuto Front Cover; Variable Speed Pumping: A Guide to Successful Applications; Copyright Page; Table of Contents; Chapter One. One Introduction; 1.1 Objectives of the guide; 1.2 Acknowledgements; Chapter Two. Pumping system hydraulic characteristics; 2.1 System characteristics; 2.2 System curves; 2.3 Pump curves; 2.4 Pump operating point; Chapter Three. System and process requirements; 3.1 Supply and demand controlled systems; 3.2 Introduction to variable speed concept; 3.3 Process requirements; Chapter Four. Pumps; 4.1 Classification of pumps: 4.2 Rotodynamic pumps 4.3 Positive displacement pumps Chapter Five. Concepts for estimating pumping energy costs; 5.1 Flow duration diagrams; 5.2 Specific energy; 5.3 Flow regulation by varying speed; 5.4 Flow regulated by throttling; 5.5 Parallel pumps common header; 5.6 System awareness - notes of caution; 5.7 Conclusions on a VSD within a system; Chapter Six. Motors: 6.1 Types of electric motors: 6.2 Asynchronous induction motors; 6.3 Alternative electrical designs of motors; 6.4 Motor construction and cooling; 6.5 Motor starting; Chapter Seven. Variable speed drives; 7.1 Types of variable speed drive 7.2 Variable speed drives for induction motors 7.3 Variable speed

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A3.2 United States regulations and standards

## Sommario/riassunto

Prepared by industry experts from the pump, motor and drive industries under the auspices of Europump and the Hydraulic Institute, this reference book provides a comprehensive guide to variable speed pumping. It includes technical descriptions of pumping systems and their components, and guides the reader through the evaluation of different speed control options. Case studies help illustrate the life cycle cost savings and process improvements that appropriate variable speed pumping can deliver. Authoritative, global reference to Variable Speed Pumping, by Europump and the Hydraulic Inst