Dredge Pump Application & Operation

A short course prepared by Robert Visintainer, P.E.

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This 4-hour course provides an introduction to the design, performance, selection, operation and troubleshooting of centrifugal slurry pumps in dredging applications.

Topics include:

- Slurry pump basics
  - Theory vs. practice
  - Design and construction
  - Performance curves
  - The pump-system interaction

- Suction performance
  - Cavitation
  - NPSHA and NPSHR
  - Design factors

- Solids effect on pump performance
  - Settling Slurries
  - Non-Settling slurries

- Pump wear performance factors
  - Operating conditions
  - Materials
  - Hydraulic design

- Transient operation and troubleshooting
  - Startup and shutdown
  - Multiple pump systems
  - Water hammer
  - System stability