This book can be purchased through Amazon here. A summary is presented below.

Slurry Trenching – History, Uses, Fundamentals, and Construction

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Overview:

The authors approach this text from the viewpoint of a practioner and an academic. This combination provides a wide viewpoint on several nuanced concepts related to the subject construction method. The book is written to present a fundamental understanding of slurry trench construction and includes an introduction to slurry trenching, a short history of the method, a discussion of alternate construction techniques, detailed descriptions of slurry trench construction methods, and an overview of some of the fundamental principles needed to understand and implement the slurry trenching technique. The book is meant to be primarily a resource for practicing engineers and researchers and secondarily as a supplemental text for graduate or advanced undergraduate instruction. Practitioners engaged in the design or construction of slurry trenches are the primary users of this book. Specialized texts of this nature are challenging in that the content is meant to be comprehensive all the while the industry is constantly changing. This constant change is true of all techniques in the ground improvement industry because the industry is constantly improving as modern design, research, and construction are pushing the boundaries of the profession. As with any specialized construction technique, readers are encouraged to expand their understanding of slurry trenching by keeping up with current research and practice. Ideally, readers will come to this book with a basic understanding of geology, soil mechanics, mathematics, and natural sciences commonly provided during the first three years of an undergraduate education in civil engineering.

Chapter List

Chapter 1 – Introduction, History, Deployment Options
What is a slurry trench?

Chapter 2 – Types of Slurry Trenching
What slurry trenching methods are available?

Chapter 3 – Alternate Construction Approaches
What are alternate construction approaches to slurry trenching?

Example Content from Chapter 1 (What is a Slurry Trench?):

A slurry wall or slurry trench may be broadly defined as any vertical underground feature (wall) that is installed using slurry to support the excavation. The concept of using a slurry to support the sidewalls of an excavation is a natural extension of the use of mud supported drilling wherein slurries are used to keep the borehole open. The term slurry trenching is widely used to refer to construction of non-structural walls to accomplish environmental and geotechnical objectives. In the USA, practitioners often use the term slurry wall for structural wall installations that are also commonly known as diaphragm walls. For the purposes of this book, the term slurry trench is used to describe the variety of unreinforced wall types. Hence this book is not about structural diaphragm walls where the slurry is replaced by reinforced concrete but rather those walls where the slurry is left to harden in place or replaced with materials of significantly lower strength than reinforced concrete.

Slurry trenching is a term that describes the means of construction where an excavation is made under a slurry head and the role of the slurry is to maintain trench stability. Slurry trench wall, slurry wall, vertical cutoff wall, cutoff wall, and vertical barrier are all terms that refer to the finished product. For slurry trenching, the wall may result from hardening of the slurry used to excavate the trench or from materials placed in the trench to replace the slurry. Cutoff walls installed using other methods such as soil mixing, sheet-piling, secant piling, jet grouting, and injection grouting are not slurry walls. These other methods are not based on the slurry trench construction method and are not the principal subject of this text. These alternatives to slurry trenching are, however, summarized in this book for ease of comparison.

List of Figures

List of Tables

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Index

arching
attapulgite
Atterberg limits
backfill segregation
bathtub
Bingham fluids
bio-polymer
bleed
borrow materials
breaker
breaking slurry
breakthrough
budget
clamshells
clay
colloids
compaction
compatibility
compressibility
concrete
consolidation
contaminant
cost
curvature
Darcy's law
density
desanding
desiccation
desilters
desilting
development (trench)
dewatering
diaphragm wall
diffuse double layer
diffusion
dispersion
DNAPL
drainage
electrolyte
embedment
factor of safety
filter cake
filters
fines content
flocculation
fluids
freezing

friction angle
gel strength
gradient
grain size distribution
gravel
grouting
guar gum
hanging wall
hydration
hydraulic conductivity
hydromill
impermeable
incompatibility
interlayer
key
laydown
leakage
long stick
loss on ignition
Marsh funnel
minerology
modified filter press
Mohr's circle
moisture content
mud balance
NAPL
nonaqueous phase liquids
one phase
open cuts
organic
pathways
permeability
pH
piano key
piping
polymer
porosity
portland cement
principal stress
project goals
pumping
refusal
retardation
saline
salt
sand
secant pile walls

sedimentation
self-hardening
semifluid
sepiolite
shear strength
silos
silt
slag
slope
slump
slurry breaker
slurry pond
sorption
spoils
staging
suspended solids
suspension
swelling
termination
thixotropy
trench stability
UCS
unsuitable soils
venturi
venturi mixer
viscometers
viscosity
void ratio
water content
water source
window
work platform
workability