Erosion and Sediment Laboratory Updates

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Sloping Laboratory Erosion Device (SLED)

FEATURES AND ENHANCEMENTS:

• Mass Balance Setup
  (overland flow, under drain, and overspray collection)

• Rainfall simulator with up to 12” per hour rainfall intensity

• (2) Sleds each at 30’ x 8’

• Total Pad will be 50’ x 50’

• Hydraulic ram lift design, with locking side supports

• Soil placement and removal efficiency enhancements
Sled Design

P = 36.4 kips say 20 tons

HYDRAULIC CYLINDER WORK POINTS

MUST BE VERIFIED BY HYDRAULIC SUPPLIER. NEED DETAILS AT THE CONNECTION POINTS TOO.

W = 40 kips

1/4" = 1'-0"
• SLED Construction
Hydraulic System
Conceptual Facility Layout
Materials Index Testing

Additional Equipment List

Some additional equipment we will be specifying will include:
• 20-ton punch press, with standard dies ranging from 4" to 12" square
• Thickness gage
• Resiliency press
• Light meter
• Smolder test box
• Stiffness test apparatus
• Water absorption index test screens
• Drying oven
• Ashing oven
• Universal materials testing machine
Universal Materials Testing

SMART Loadframe Features

- Twin Column loadframe
- Twin ball screw drive with closed-loop servo and motor controls
- Crosshead Guidance System: Uses heavy channel shape steel columns. Maximum lateral motion $\pm 0.25$mm over full crosshead travel
- Anti-backlash system: standard on floor models, optional on table models
- Emergency Stop Control: via rocker and mechanical limit switches
- Interchangeable electronic loadcell weighing system is standard
- Electronic self-identifying loadcell & extensometer are optional
- Automatic overload protection
- Quick-Disconnect loadcell & fixture system
- Controlled release of load in the event of power failure
- Two-color (black & beige) is standard. Special colors available
Comments and Questions

• SLED
• Facility
• Index Tests