GETTING THE MOST FROM YOUR EQUIPMENT

Legs, Drags & Belt Maintenance
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Warrior Manufacturing

En Masse Conveying
Elevating
Enclosed Belt Conveying
Safety

- Always read and follow safety labels
- Lock out / Tag out
- No Smoking
- Do not exceed capacity
Bucket Elevator Components

- Boot Section, Inspection Section, Intermediate Sections, Pressure Relief Sections per NFPA 61, Head Section
- Accessories
Installation and Startup

- Straight and plumb
- Caulked section joints
- Belt stretch … 1-1/2 to 2%
- Belt tension
- Drive rotation
Installation and Startup

- Guarding in place
- Cup hardware
- Splice inspection (correct direction)
- Safety equipment checkout
- Labeling visible and undamaged
  - Are they painted over?
Routine Maintenance

- Hot spots on paint
- Throat plate adjustment
- Check for wear on head pulley lagging
- Check for loose lining (causes chokes)
- Lubricate bearings & reducer
- Check tension on drive belts
Routine Maintenance

- Check safety systems
- Check belt tension
- Clean out boot section frequently
- Don’t start under a choked condition
- Inspect belt and cups for damage
Troubleshooting

- Under capacity
  - Verify speed
  - Check for belt slippage
  - Determine if cups are completely filled
  - Is the bucket elevator backlegging?
Troubleshooting

- Belt not tracking properly
  - Are the take ups evenly adjusted?
  - Shim head bearings as required
  - Is the elevator plumb?
  - Check for material build up on boot pulley and excessive lagging wear on head pulley
  - Check belt tension
  - Determine if elevator is being side loaded
En Masse Conveyor Components

- Head Section, Intermediate Sections, Tail Section, Inlets, Discharges, Knee Section, Accessories
- Configurations
- Inlet types
- Chain return options
- Other typical features
Installation and Startup

- Straight Sections
- Inlet locations
- Guarding in place
- Drive rotation
- Safety equipment checkout
  - Slack chain / choke switch
Routine Maintenance

- Chain tension
- Inspect chain, flights, sprockets and liners for wear
- Verify proper operation of safety equipment
Routine Maintenance

- Lubrication - Follow recommended lubrication schedules for bearings and speed reducers
- Check drive belt tension
Troubleshooting

- Under capacity
  - Check speed, feeding, incline

- Material carry-over
  - Long discharge openings (longer discharge openings are required for taller conveyors to allow time for material to discharge)
  - If the speed of the conveyor has been increased - longer discharge openings may be required.
  - Carry back cups
Enclosed Belt Conveyor Components

- Head Section, Intermediate Sections, Tail Section, Inlets, Discharges, Knee Sections, Accessories
Installation and Startup

- Straight installation of casing
- Square splice on belt
- Installation of splice protectors
- Monitoring equipment - Never operate an enclosed belt conveyor without underspeed switch on tail shaft and plug switch in discharge.
Installation and Startup

- Straight controlled feed into Loader
- Adjust skirt board rubber on loaders
- Belt tension
Routine Maintenance

- Use caution when opening plugged tail
- Monitoring equipment
- Check for signs of belt tracking problems
- Check belt tension
- Check and adjust skirtboard rubber in loader areas
- Lubrication
Troubleshooting

- Belt not tracking
  - Shim head or tail bearings
  - Verify that loading of the belt is not off center
  - Verify that belt spice is square
  - Check for material build up on pulleys
Troubleshooting

- Belt slippage
  - Proper take-up tension
  - Check for excessive wear on head pulley lagging
Troubleshooting

- Under capacity
  - Check belt speed
  - Check loading of belt
Troubleshooting

- Tail Plugging
  - Conveyor operating over capacity
  - Material being side loaded
  - Improper adjustment of skirtboard rubber
  - Plug condition at the discharge
THANK YOU

Presented by

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