APPLICATION BULLETIN

APPLICATION: Lumber Stacker Hoist

INDUSTRY: Dimension Lumber Mills

PRODUCT: Oil Shear Posidyne Clutch/Brake

LUMBER STACKER HOIST

- 4:1 CABLE REDUCTION
- CABLE IDLERS
- Posidyne FAN COOLED CLUTCH/BRAKE
- HIGH INERTIA FLEX COUPLING
- STEP-UP BELT DRIVE
- LOW SPEED / HIGH HP INDEXING DRIVE MOTOR
- 4:1 CHAIN DRIVE
- 60:1 GEAR REDUCER
- LOW INERTIA GEAR COUPLING
- 17" DIA. CABLE DRUMS
- CABLE DRUM DRIVE SHAFT
- LUMBER STACK
- LUMBER PLATFORM

HIGH SPEED / LOW HP RETURN DRIVE MOTOR
LUMBER STACKER HOIST

WHERE THEY ARE USED: The lumber stacker hoist is used in dimension lumber mills to stack green or undried lumber for drying.

HOW THEY WORK: On a green lumber stacker a platform is raised to the upper position. A layer of boards is pushed onto the hoist, and several sticks (small spacer strips) are laid on the top to provide a space for air circulation during drying. The platform is then lowered one layer, and the process is repeated until a full stack is made.

A continuously running motor is connected to the input side of a fan cooled “SA” logic Posidyne Clutch/Brake. On demand the medium spring set, air assist brake is released as the clutch is engaged. Driving through a gear reducer, chain drive and cable drum arrangement, the hoist is indexed down. Often a high-speed return motor is connected by to the main drive through a 2:1 increaser belt drive. This way the empty platform can be returned quickly, ready to start a new stack.

PROBLEMS SOLVED: The motor runs continuously permitting use of standard design B motors rather than special design D brake motors or complicated electronic soft start controllers. The soft start of the oil shear Posidyne Clutch/Brake reduces damage to motors, brakes, reducers, chain drives etc. by engaging the clutch rather the shock of across the line starting of the motor.

Longevity - The Oil Shear Posidyne Clutch/Brake is designed to start heavy loads smoothly, and with very little wear on the friction surfaces. The sealed design seals out dust, dirt, and moisture.

Consistent Accuracy - The oil shear system makes the Posidyne Clutch/Brake consistent over cold start to hot run, and day to day making it easy for the operator to control.

IMPORTANT FEATURES:

- Totally enclosed, oil cooled unit for long service life with low maintenance in the harshest environments.
- Oil Shear Technology and innovative friction material provide smooth controlled torque for quick, smooth acceleration.
- Consistently accurate starts and stops with no adjustment required.
- Continuously running standard motor for long service life and lower energy consumption.
- “SA” logic provides spring set brake for safety and air assist for brake torque adjustment for positioning.