

# Water Savings

## Semi-Dry Conveyor Lubrication

### Dicolube Sustain 2 VL112

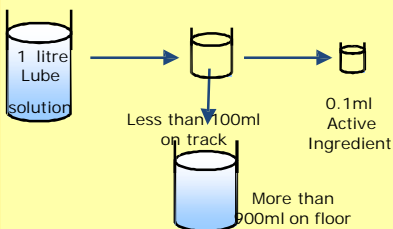
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#### A. Aim

- Reducing water usage to 3.5h/hl is a strategic goal of SABMiller
- A trial was set to contribute to this objective by reducing water consumed through conveyor lubrication, without compromising the efficiency of the conveyors or increasing

#### B. Background

- Lubricating conveyors in beverage packaging facilities by spraying a diluted lubricant ensures smooth and efficient operation of the conveyors by reducing the Co-efficient of Friction (COF) between wear strip and slat, as well as between container and slat.
- More than 98% of this solution is water, of which 90% falls to the floor and is wasted.



- Added to the waste are excessively wet and slippery floors
- The presence of moisture promotes microbial growth, compromising hygiene levels in packaging halls.



Slime Growth



Wet Floors

- The introduction of Fully Dry Lubricants has produced unsatisfactory results, especially on Returnable Glass Bottle (RGB) lines where soil levels are high.

#### C. Methodology

- At Nile Breweries Limited, Uganda, Diversey Dicolube Sustain 2 VL112 was applied through the conventional conveyor lubrication system, from unpacker to packer.
- Spraying intervals were reduced up to 75%.
- The performance of this application was measured against the following criteria:



- Lubricant cost
- Water consumption
- Impact on effluent
- Conveyor wear
- Conveyor down-time
- Bottle pressure
- Appearance and soiling
- Energy usage
- Total variable cost

#### D. Results

##### 1. Lubricity COF<0.13

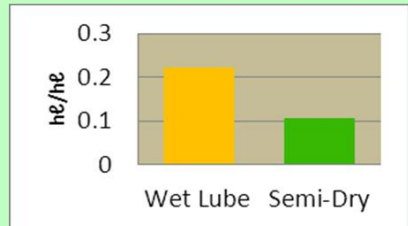


##### 2. Lubricant Cost

↓ 10.07%

#### results cont.....

##### 3. Water usage ↓ 52.03%



##### 4. Effluent impact reduced



##### 5. Conveyor Wear = NONE

##### 6. NO conveyor down-time

##### 7. Bottle pressure = LOW

##### 8. Appearance and soiling



Fully Dry Lube Lube Bottle Base Test



Semi-Dry Lube Bottle Base Test

##### 9. Energy use ↓ 1.29%

##### 10. Total variable cost ↓ 10.31%

#### E. Acknowledgements

Isaac Ongora & Team - (then Packaging Manager, NBL, Uganda)

Gavin van Wijk - (Technical Director, NBL, Uganda)

#### Conclusion

- Water used for conveyor lubrication in beverage packaging facilities, can be reduced by more than 52% when using a specially formulated SEMI-DRY lubricant.
- All performance, reliability and cost criteria for conveyor lubrication are met throughout the application.
- Diversey Dicolube Sustain 2 VL112 has been Globally approved by SABMiller as a water saving measure in all packaging facilities, including RGB Lines.

