Comparison of the Performance of the New RL-3 Impeller to the HE-3 Impeller in a Water Treatment Application

Plant Information:
Pinellas County Florida
South Cross Bayou WRF

Application Information:
• Anoxic Basin: Start-up in 2000
• Basin Dimensions: 40’ long by 35’ wide by 17’ water depth
• Plant Flow: 21 MGD average

Agitators Compared:
• 5hp at 30 rpm unit with 94”φ HE-3 up-pumping impeller
• 5hp at 30 rpm unit with 84”φ RL-3 down-pumping impeller
HE-3/RL-3 Initial Installation
HE-3/RL-3 After 8 Weeks Operation
Summary

• Maintenance Benefits
  – Customer had to drain the basin and increase flow rate to other basins which required manual changes to the process
  – Outfitting personnel for basin entry and removal of fibrous material is eliminated
  – Disposal issues of fibrous material eliminated

• Mechanical Benefits
  – Increased up-time of your plant
  – Reduces load on agitator system such as gears, bearings, motor, shaft, and impeller blades
  – Reduced vibration and increased life of agitator

• Process Benefits
  – Increased process up-time and elimination of manual process changes
  – Elimination of fibrous material on impeller maintains top to bottom flow pattern which improves solids suspension and blending uniformity in basin
  – Reliable and consistent discharge within plant operating permit limits

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