OPTIMALISASI
INSTALASI PENGOLAHAN AIR LIMBAH (IPAL)
PT. BEHAESTEX PANDAAN- PASURUAN*)*

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ABSTRACT

PT. Behaestex have had Wastewater Treatment Plant (WWTP) that treatment processes consist of physics-chemical treatment and activated sludge biological treatment. Effluent of WWTP have appropriated for waste water standard according to decision letter of East Java Governor No. 45 in 2002's, except colour parameter. Effluent of WWTP still have high colour content. Another problem is effluent from physics-chemical treatment still have high pH and temperature. The temperature range is in 35 to 45℃ and pH range is in 10 to 11. Optimalization of PT. Behaestex WWTP was done aiming to reduce colour content in wastewater, adjusted to neutral pH between 6,5 to 7,5 and reducing temperature to be less than 30℃. Optimalization that can be done are optimizing coagulation-floculation unit with determination the dosage of coagulant that effective to reduce colour content. Result of optimalization indicated that the most effective coagulant to reduce colour content is ferrous sulfate with 500-6000 mg/l dosage. The type of Cooling tower to be used is induced draft crossflow cooling tower and pH adjustment with sulfate acid 98% with total requirement 35,8 L/day.

Key Words : Reducing Colour Content, Coagulation-Floculation, Cooling Tower, pH Adjustment