

Flocculator Baffles

August 14, 2011

Abstract

The flocculator baffles for large plants could be made of a rigid material that slides into slots in the walls of the flocculators. If we can locate a suitable material and if we can slide these baffles into the channel slots while standing on top of the channel walls, then it would be possible to use a rigid baffle for small spacings. Currently we assume that it isn't possible to use rigid baffles until the spacing between baffles exceeds a human dimension of 45 to 60 cm.

students 2

skills fabrication/structures

1 Introduction

The flocculator baffles are currently made of corrugated plastic sheeting and PVC pipes (figure 1). There may be opportunities to improve on this design by using different materials and different fabrication techniques. Any alternatives must follow the AguaClara design philosophy including ease of maintenance by a single operator.

Identify possible materials and compare their cost with the current roofing material and PVC frame system. Explore alternatives including plastics, reinforced cement panels, and other “safe for using in a drinking water treatment plant” materials. A material with corrugations that run horizontally would be stronger for a given thickness than a flat sheet. Consider fabrication methods, local availability, and ease of installation/removal. Could the plastic roofing sheets that we currently use work for this application if they were rotated with the corrugations running horizontally rather than vertically?



Figure 1: Floc baffle construction using corrugated plastic sheets and PVC pipes.