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### **Importance of gassing slot sizing on carbonation gas absorption: A computational approach.**

In 2024, Michigan Sugar Company Bay City identified hampered gas absorption in pre-carbonation and 1st carbonation. Further investigation revealed that the gassing slot sizes were oversized. The oversized slots were theorized to create inconsistent gas flow from each slot. Both standard and computational fluid dynamics analyses were performed to determine the best slot sizing. The first pass analysis using standard fluid dynamics approach determined a test size, and this size was verified using computational fluid dynamics. The slots were adjusted based on the computational analysis, and absorption was remeasured. After modification, absorption in pre-carbonation and 1st carbonation met specification.

