



OVERVIEW

SoniView is an acoustic system that provides craft brew masters a non-invasive monitoring solution for yeast slurry dumping that maintains product integrity and provides real-time measurements of key production indicators, reducing product loss and labor costs. Unlike current sampling and monitoring methods that require modifications to fermentation tank design, SoniView externally attaches to the tank, providing automated, accurate and timely information to optimize production planning. By monitoring the formation of gases during the fermentation process, SoniView indicates when fermentation is complete.

By emitting a very short, engineered soundwave through transducers, physical properties of the fermented beer and yeast slurry are extracted using a time-domain signal process, providing the brewer with actionable information.

Preliminary market assessment suggests that microbreweries and regional breweries are the best entry point for SoniView with the impact this technology could have on the bottom line given product waste during yeast slurry dump. The current global total market for small brewery equipment is approximately \$1.23 billion.

APPLICATION AREA

Sector: Manufacturing

Area: Food and Beverage

Industry: Craft Beer

Market: Microbrewery

PARTNERSHIP OPPORTUNITIES

We are seeking a brewery equipment manufacturer to license the technology or fund further test and evaluation of SoniView through a Cooperative Agreement.

- ✓ Cooperative Agreement
- ✓ License
- ✓ Tech Assistance

CONTACT

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TECHNOLOGY READINESS LEVEL: 4

Component Prototypes Tested in a Controlled Environment

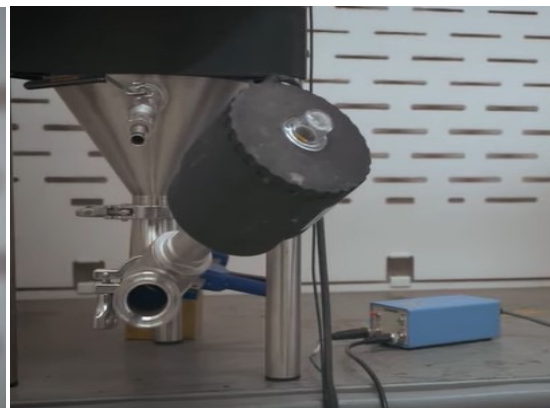
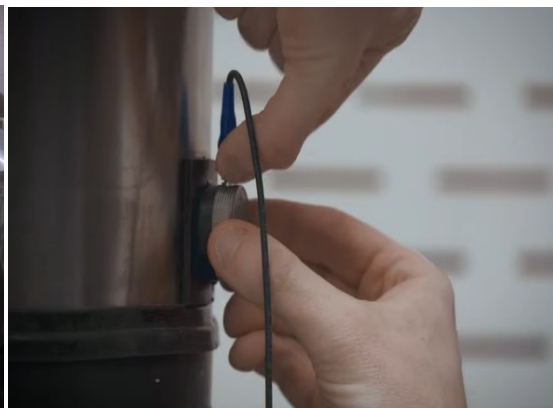
IP information

US Patent# 11,567,038

Patent Pending S#167622

ADVANTAGES

- ✓ Non-Invasive – It doesn't touch the product
- ✓ Real-time – Provides continuous measurements, allowing for rapid intervention and process optimization
- ✓ Cost-effective – Low-cost sensors with small operational footprint and very low maintenance requirements
- ✓ Safe – Uses sound energy to reduce the need for manual and invasive sampling
- ✓ Accurate – Sampling processes and analyses are less affected by noise and errors when compared to existing practices



TECHNOLOGY DESCRIPTION

SoniView, an external add-on, uses engineered acoustic waves and signal processing to extract valuable product information during fermentation and yeast slurry dump processes. Transducers emit a very short acoustic chirp burst through the tank or process pipe in a time-domain signal process that extracts several physical properties of the product. It prevents contamination and leak paths, reduces maintenance, and improves efficiency, lowering cost while increasing product yields.

MARKET OPPORTUNITY

This acoustic system can be set-up as a stand-alone monitoring solution or integrated into the existing brewery information systems to trigger automated actions in the brewing process. Brew masters can add-on the SoniView solution to continuously monitor fermentation and increase batch production and reduce turn-over for normal fermentation tanks. Breweries that produce up to 40,000 barrels per year can continuously monitor fermentation and minimize waste. There are over 2,000 *microbreweries* producing 2 million gallons of beer per year. This solution can be applied to other alcoholic and non-alcoholic beverage production.

NEXT STEPS

This acoustic system has successfully been tested through bench scale experiments and is currently being tested by New Mexico breweries. Further testing and demonstration into the brewery production process to provide the data to OEM manufactures.

RESOURCES

<https://www.youtube.com/watch?v=5LLdtfu-OSI>