

Alaskan Brewing Company

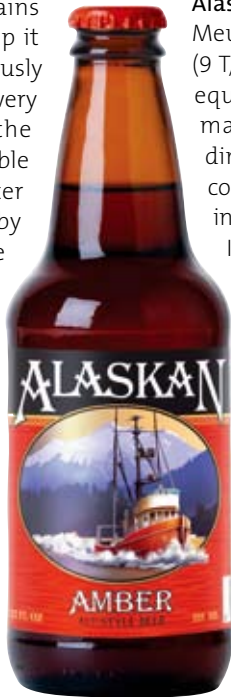


In 1986, the Alaskan Brewing Company (Juneau, Alaska) opened, becoming the 67th operating brewery in the United States. Alaskan Brewing Co handcrafts some of the country's most award-winning beers in one of the most majestic settings on earth. Their products have brought home more than 100 major medals and awards, almost half of which are gold.

With no roads connecting the coastal community of Juneau to the rest of the United States, everything arrives and leaves by water or air and the weather always has the last word. At Alaskan, the brewery has relied on innovation to grow as a company without adversely affecting the local environment. For example, by the creation of the Coastal CODE, a nonprofit ocean health initiative, the brewery maintains a commitment to environmental stewardship while providing a true "taste of Alaska" to the Western states. They were also the first craft brewery in the United States to install a CO₂ reclamation system to further reduce their environmental footprint and become more self sufficient.

Pilot Trials

In the year 2000, the brewery contacted Meura with a specific request. Surrounded by the 1,500 square-mile Juneau Ice Field and the Tongass National Rainforest, the brewery had an issue with disposing of its spent grains. The practice at that time was to dry the spent grains up to 90% dry matter and ship it 1,500km down to Seattle; obviously an expensive solution. The brewery had the idea to dewater the spent grains as much as possible with a Meura 2001 mash filter (thanks to the compression by the membranes) and to use the dried spent grains on-site as fuel. In the summer of 2001, a Meura 2001 pilot filter was sent to the brewery in order to check the highest dry matter achievable with the membrane compression. Trials showed that values of 35-38% dry matter could be obtained with an extended compression time of 30-40 minutes. Another important factor for these trials was to make sure the flavor and



quality standards of their award winning beers would continue compared to their lauter tun based brewing system.

Industrial Realisation

As a consequence of the positive results of the pilot system trials, in December 2007 Alaskan Brewing Company entrusted Meura with an order for a Classicmill (9 T/h) and a Meura 2001 mash filter equipped with 18 chambers (3.2 T malt throw). The Classicmill was dimensioned in order that one brew could be milled in 20 minutes and no intermediary grist case was necessary. In July 2008 the equipment was successfully commissioned.

The figures from the pilot trials were confirmed with the industrial Meura 2001 and a high dry matter content (>35%) for the spent grains was achievable. In addition, extract savings of about 6% were realized compared to the previous lauter tun. Further an important reduction in waste water was observed. For the year 2008 over 1,000,000 gallons (about 3800 m³) of water was

saved (which is about 0,25 l water less per produced liter of beer), knowing that the mash filter is working only at the half of its potential capacity.

The brewery is very satisfied with its decision to install the Meura 2001 filtration technology.

Monsville Brewhouse

The Alaskan Brewing Company is the first U.S. craft brewer to opt for the Meura 2001 technology. As a result of this successful project, Meura decided to develop a new brewhouse concept equipped with a Meura 2001 mash filter and especially adapted for Craft brewing. The concept is named the "Monsville" brewhouse (see text box below for further explanation).

Thanks

The Meura team very much enjoyed working with the Alaskan brewing team! Meura would like to thank the Alaskan Brewing Company for their trust and wish the brewery success in the further development of its business!

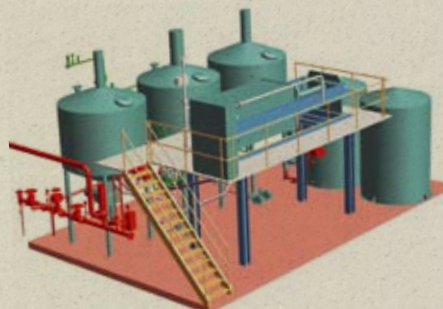
Monsville

a Meura brewhouse for the Craft brewer

The Belgian brewing industry is known worldwide for its unique variety of beer types, and also for its important suppliers to that industry. For many years two major equipment manufacturers, the companies "Meura" and "Les Ateliers de Monsville", have been supplying to breweries worldwide. Both companies were created during the nineteenth century; Meura in 1845 with a focus on large scale breweries and Les Ateliers de Monsville in 1888, concentrating on medium-sized and small breweries. In the 1990's Meura and Les Ateliers de Monsville joined forces and are today working under the Meura name.

Over recent years Meura has been frequently contacted by Craft brewers asking for Meura's technologies, but adapted to their needs. This evolution led Meura to rethink their successful large scale brewhouse concept for the Craft brewing industry. This brewhouse concept has been named the "Monsville" brewhouse, referring to the long experience of Les Ateliers de Monsville in small and medium-sized brewhouses.

Two types of Monsville brewhouses have been developed: the Monsville 50 and the Monsville 100, being able to produce respectively 50 and 100 hl of wort per brew. Each brewhouse can make up to 4 to 5 brews a day. Central to the Monsville brewhouse is the Meura 2001 mash filtration technology. A mash filter with reduced dimensions, the Meura 2001 Junior, has been developed, keeping all the advantages of the internationally renowned Meura 2001 filtration technology. The installation is skid mounted and pre-tested according to a "plug-and-play" concept which allows the project to reduce the time of on-site erection and start-up.



The Monsville brewhouse is a state-of-the-art brewhouse especially developed for the Craft brewing industry and having the following unique advantages:

- The Meura 2001 technology enables working with all kinds of adjuncts and at high proportions, which gives craft brewers the possibility to make the recipe of their choice.
- Possibility to work at high densities, advantageous for high fermentation beers
- Exceptional yields (at least 2 to 3% above those obtained with lauter tuns)
- Very dry spent grains up to 30% dry material
- Clear worts can be produced regardless of the presence or absence of husk material.

Monsville
For Craft Brewers, by MEURA