

CLARISAVER

Wort clarification by settling

The next step after wort boiling and before wort cooling is the elimination of the trub (hot break) together with insoluble hop residues from the boiled wort. Several separation systems exist, such as whirlpools, centrifuges and settling tanks.

Thanks to the recovery of a non-oxidised trub, Meura's **CLARISAVER**, a wort settling tank, is the only trub separation technology advisable for trub recycling. The trub from a wort settling tank is oxygen free during the wort cooling sequence and thus not oxidised. This is an important qualitative advantage in relation to trub recycling and compared with the trub from the whirlpool. For quality reasons (trub oxidation) having the trub recycled from a whirlpool should therefore be avoided.

Moreover, while the loss of yield with a good whirlpool represents an average of 1 to 1.5%, the loss of extract with a wort settling tank when recycling the trub is almost zero. In addition, an average of about 10% of alpha acids from the hops can be recovered from the trub recycling. The water consumption of the wort settling tank is much lower compared with a whirlpool, where water is used to drain the trub cone out of the vessel. So both qualitative and quantitative advantages can be gained with this modern equipment.

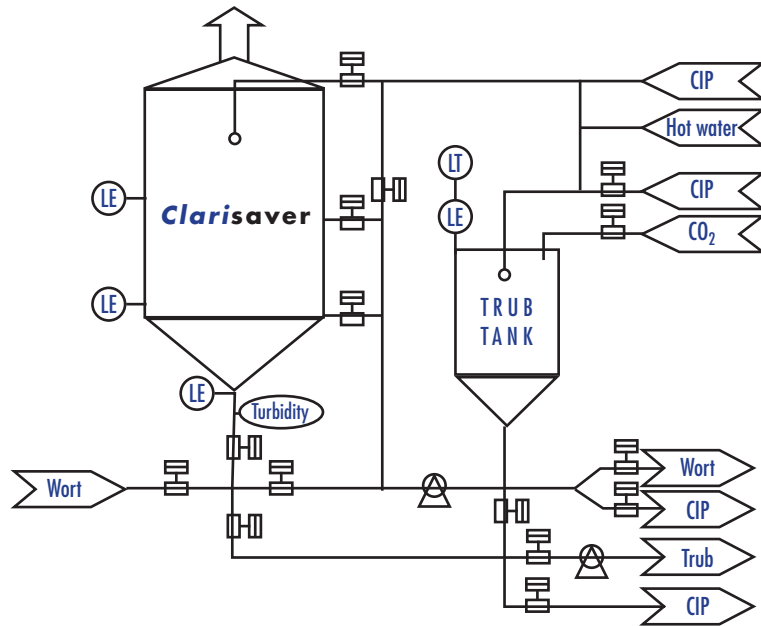
Thanks to the **Meura 2001** mash filter working with a fine grist and the **CLARISAVER** making it possible to recycle the recovered trub, the brewhouse has an outstanding extract yield.



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MAIN ASSETS

- **Oxygen free recovery** of hot trub **during the wort cooling** sequence and not afterwards.
- Possibility therefore **of recycling this non-oxidised hot trub** (not recommended with a whirlpool where the trub cone is intensely oxidised). This will increase the OBY (Overall Brewhouse Yield) with at least 1% compared with a whirlpool system.
- **Limited Shear Forces** due to gentle filling.
- **Allows the control** of the fatty acids content of the clarified wort.
- **Low water consumption** (compared with a whirlpool where water is used to drain the trub cone out of the vessel).

TECHNICAL DESCRIPTION

The **CLARISAVER** consists of a vertical cylindro-conical tank. The wort is clarified by means of natural decantation and is collected via several wort outlets situated at different levels on the tank wall.

This tank has no movable parts and is filled from the bottom. The trub settles down in the conical bottom. After as little as 10 to 15 minutes rest, the trub transfer can start and the trub is recovered in a small trub tank. This tank is filled beforehand with CO₂ at atmospheric pressure. The transfer also goes from bottom to bottom in an oxygen-free way. This operation is performed during the cooling of the wort. The trub has the same density as the wort after boiling and its recycling therefore represents significant savings, especially with high gravity wort.

Thanks to the very low oxygen pick-up, the trub can immediately be collected into the mash conversion vessel once the mash filter is filled up with the next brew. This guarantees an intimate mixing and spreading of the hot trub in the mash filter.

SOME REFERENCES

- Brasserie Brunehaut, Belgium
- Brasserie de Kinshasa, Congo
- Brasserie Du Bocq, Belgium
- Brasseries du Cameroun, Cameroon
- Brouwerij Louwaeghe, Belgium
- De Koninck Brewery, Belgium
- Desna Brewery, Ukraine
- FEIZ, China
- Five Star Brewery, Beijing, China
- Jupiler Brewery, Belgium
- NLDC – Martens Brewery, Belgium
- Perm Brewery, Russia
- Povolzhe Brewery, Russia

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