



Dear Readers,

We have great pleasure in presenting you the first issue of the Meura Newsletter.

Last year we conducted a survey among our Customers, to determine the level of satisfaction with the Meura 2001 mash filter. The majority have assured us of their confidence in our equipment, and we thank you once again.

Additionally, many of you have expressed a desire to know more about Meura's technology and projects' realisations... That was the inspiration behind meur@news.

The main objective of this newsletter, that will henceforth be issued twice yearly, is not only to demonstrate our technologies, but also to give you the opportunity to express your opinion on Meura's equipment, concerning performance, use, and the relevant maintenance aspects.

Because this newsletter is for your benefit, we kindly invite any comments or remarks from you our readers, to ensure that it meets the criteria you require.

Based on the same idea, our website will also be updated to be more informative and user friendly. But we will give you more information in our next issue.

We hope you will enjoy this Newsletter

Yours,

Michel Genart
Managing Director

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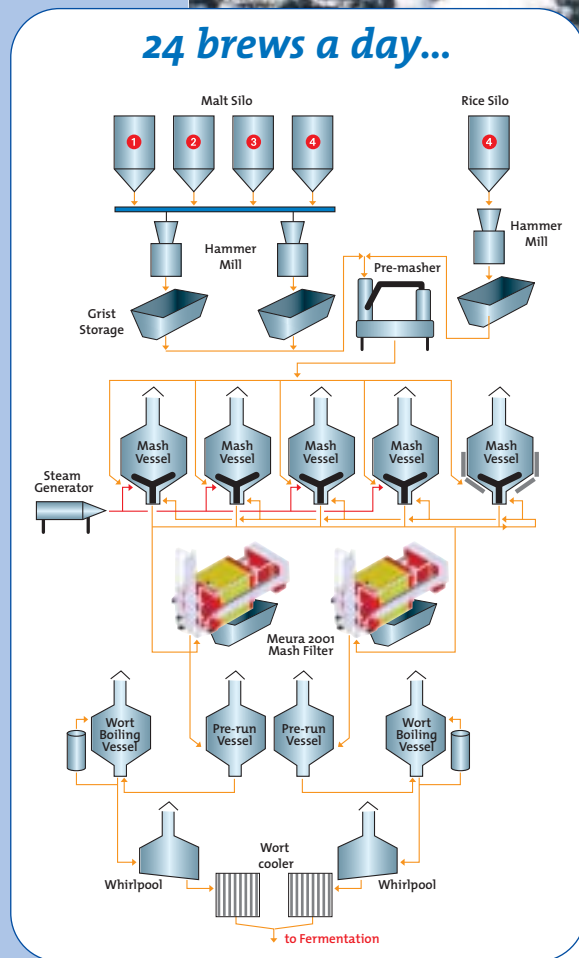


Rosar

Higher Brewing Capacity with Custom-made Technologies



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ZAO Rosar, situated at Omsk in Siberia, which is one of the flagship companies of the SUN Interbrew group, is one of the most prosperous establishments in Siberia. In order to maintain its leading position in Russia's dynamic beer market, ZAO Rosar decided to launch a comprehensive production renovation project, focused on boosting the plant's production capacity and upgrading the quality of its products to international standards. With this objective in mind, the Brewery Rosar consulted Meura in 1999 in order to increase the capacity of its existing brewhouse.

From 12 to 24 brews per day...

The initial capacity of the brewhouse was limited to a daily production rate of 12 brews using two brewing lines each equipped with a lautertun.

► First step: high gravity brewing

The brewing capacity has been increased by adopting the high gravity brewing method. Therefore the two existing lautertuns have been replaced by one MEURA 2001 mash filter, while the 6-roller-mill has been replaced by a 45 kW hammermill. One of the two wort boiling vessels has been used as a pre-run vessel and the other has been modernized and equipped with an external boiler. These modifications allowed production of high gravity wort.

► Second step: heating by direct steam injection

Once high gravity brewing has been operational, Meura has revamped the brewhouse to speed up the production rate to 17 brews a day (using only one Meura 2001 mash filter), in order to meet the requirements of the summer peak season.

This was achieved by :

- increasing the milling capacity (power of the existing hammermill increased to 55 kW);
- modifying the interconnections between the four mash vessels in order to get the optimal occupation time and so increase the mashing capacity.
- installing a clean steam generator to allow mash-heating with direct steam injection; by the way, any production stop required to clean the heating jackets (CIP) was cut out since this technology is fouling-free;
- adding a pre-run vessel and modernizing the existing wort kettle (used as pre-run vessel in the first step) with an external boiler;
- upgrading the second existing whirlpool tank;
- increasing the capacity of the CIP-plant by installing a second CIP line and optimising the distribution of brewhouse vessels on these two lines.

Of course, all these modifications have been completed by the full reconfiguration of the existing electrical and automation systems.

► Third step: a second Meura 2001 mash filter

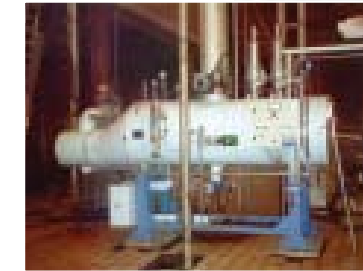
Meura expanded production further by adding a second milling line, an additional Meura 2001 mash filter and a new pre-run vessel. Another wort cooler and a wort aerator were also installed. The daily production rate of the brewhouse has then been increased to 24 brews with an industrial extract yield equal to the laboratory extract yield. The first and second steps were realized in year 2000 and the third one in May 2001, which resulted in a tripling of the initial capacity.

**This technology will be detailed in a further issue.*

Meura 2001 mash filters : general view



▼ Clean steam unit



▼ First Meura 2001 mash filter



▼ Second Meura 2001 mash filter

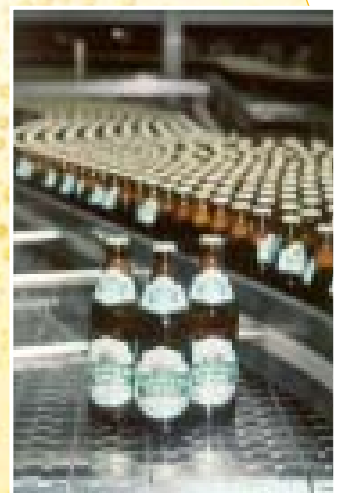


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Na Zdorovje!!

How to speak about Rosar without mentioning the Sibirskaya Korona®? Produced by the brewery since 1996, Sibirskaya Korona® is a true symbol of the Siberian region. With 2.5 million hectolitres volume, it is the leading brand on the Siberian market. Thanks to its exceptional potential, Sibirskaya Korona® has developed a strong position in the markets of West and East Siberia and the Far East region. And now this Local Premium brand is getting ready to quench the thirst of the entire Russian market.



© Interbrew



Rodenbach

In Roeselare, in the heart of West Flanders (Belgium), along the banks of the river Mandel, stands the site of the Rodenbach brewery which covers more than three hectares. Since its foundation in 1821, Rodenbach has always been a byword, synonymous with the noble tradition of quality brewing.

Moved by the increasing success of their "most refreshing beer in the world", as Michael Jackson said, Rodenbach decided in 2001 to extend their capacity to 200 000 hl/annum by building a new brewhouse. As partner for this ambitious project, they have naturally chosen Meura, Belgian pioneer by tradition.

The new brewhouse plant will produce 6 brews per day (with 2 shifts each working 9 hours) at 250 hl of cold wort. The brewing plant is equipped with a Hydromill®, a cereal cooker, a mash conversion vessel, a MEURA 2001 mash filter and a wort buffering tank, a wort boiling kettle, a whirlpool, a wort-cooler and a CIP-plant for the complete brewhouse.

HYDROMILL® and MEURA 2001 as key-factors

► Oxidation fighter

The Hydromill®, the new milling system developed by Meura, has been designed for a capacity of 15 ton malt per hour.

The Hydromill® allows to reach an excellent extract yield : >100% (see table 2).

But one of its main assets consists in avoiding oxidation (due to a very low oxygen uptake during mashing), having a positive effect on the flavour stability of the beer.

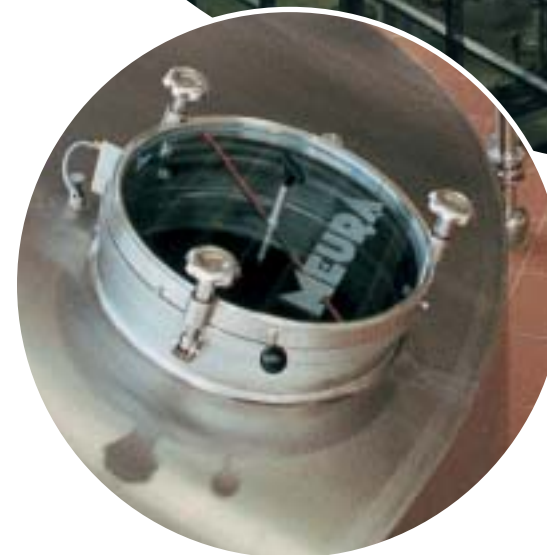
Furthermore table 1 shows a very low concentration, after mash filtration, of linoleic acids (C18:2), of which the oxidation seems to be the most significant reaction mechanism for the precursor formation of stale flavour carbonyls, e.g. (2E)-nonenal, in beer.

Hydromill®/Meura 2001: Fatty acids (ppm/ml)

	Mash filter MEURA 2001			Lauter Tun
	Brew n°26	Brew n°28	Brew n°29	
C16	10.91	11.86	11.44	15.27
C16:1	0	0	0	0.36
C18	18.42	18.50	18.51	19.38
C18:1	0	0	0	1.22
C18:2*	1.19	1.46	1.26	8.65
C18:3	0.77	0.70	0.73	1.83
Total	31.29	32.53	31.95	46.76

Table 1

* Linoleic acid



High Gravity Brewing

Mash filtration is performed with a MEURA 2001 mash filter equipped with 24 chambers (extension possible to 36 chambers). The duration of a complete filtration cycle takes about 115 min (including spent grains removal) for a cast out volume of 270 hl hot wort.

First wort concentrations being between 24 and 26°Plato with the use of the Hydromill®, the capacity in malt equivalent per filtration chamber raised to 192 kg (compared with 175 kg per chamber by using dry milling), allowing an even more efficient use of the brewhouse.

► Some results:

	Unit	Brew N° 25	Brew N° 26	Brew N° 30
Hydromill® (Gap between discs)	mm	1	1	1
THROW (Malt Equivalent) – Meura 2001 mash Filter				
Capacity	Kg	3713	3708	3706
Average extract yield	%	76.98		
Filter occupation time	Min	108'08"	118'25"	103'47"
WORT BOILING				
Volume at start of boiling	hl	301	302	316
Density at start of boiling	g/g %	11.00	10.90	10.40
Extract yield	%	101.53	101.02	100.79
Volume at end of boiling	hl	271	275	280
Density at end of boiling	g/g %	12.20	11.95	11.70
Extract yield	%	101,87	101,27	100,94

Table 2

The brewhouse, the erection of which has been completed within 3 months, was to be operational by 24th January 2002. The commissioning has been free of problems thanks to excellent cooperation and working understanding between the Rodenbach and Meura teams.





◀ View of the new brewhouse



▲ Hydromill® : Oxidation fighter

Opening of Rodenbach brewhouse :
 Jan Toye, CEO of Diepensteijn (3rd from left) and Karine Toye-Van Goethem;
 Rudi Ghequire, Site Manager of Rodenbach (4th from left);
 Willem Van Herreweghen, Quality & Logistic Director of Palm (1st from left);
 Christian De Brackeleire, General Manager of Meura (2nd from left);
 Robert Braekeleirs, Sales & Marketing Manager of Meura (2nd from right);
 Claude Bauduin, Area Sales Manager for Western Europe and Africa (1st from right). ▼



In 1864, the Rodenbach Brewery had worked with Meura to build its first Brewhouse of which three vessels are still in operation : one mash tun and two wort kettles.

After 138 years, Rodenbach have decided to choose Meura again, because we are very confident in the technological advances that Meura have made in brewing technology.

The Hydromill® process is at an optimum and, this together with the Meura 2001 mash filter allow to realise excellent wort quality and high brewhouse yield.

The Hydromill® is very silent compared with other mills, and therefore compensatory measures to reduce noise pollution are unnecessary.

After three months in operation, we have decided to close the old brewhouse. The working relationship between ourselves and Meura is professional and efficient, and there was only a period of nine months between demolishing the old brewhouse and the first proof test brew, which in fact also proved to be the first effective brew.

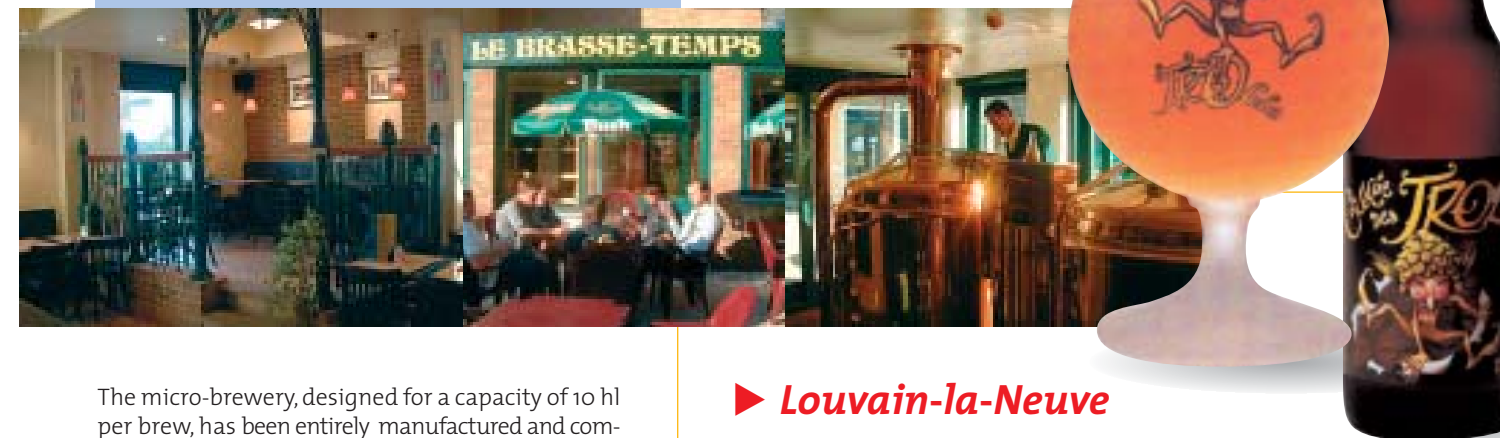
Well done Meura!

Site Manager Rodenbach
 Rudi Ghequire



The "Brasse-Temps"

Situated in the small Belgian village of Pipaix, the family-owned brewery Dubuisson has survived the centuries, with now the family's 8th generation at its head. Founded in 1769, the "Old Lady", renowned for its beer of character - the Bush -, dreamed of a micro-brewery to enter the new millenium. And in September 2000 the "Brasse-Temps" was opened at Louvain-la-Neuve, in the heart of the University-city.



► Louvain-la-Neuve

Since the foundation in 1666 of Charleroi, Louvain-la-Neuve is the only new city created in Belgium. Louvain-la-Neuve's special feature is the variety and imagination with which it has been planned. With narrow streets, little squares and staircases, the centre of Louvain-la-Neuve is only accessible to pedestrians; parking is contained beneath the university in three levels of underground car park.

Louvain-la-Neuve is first of all the cradle of the UCL University (Université Catholique de Louvain), which includes, among others, a Unit for Brewing and Food Processing Industries.

In 1997 Meura decided to install its own R&D Centre, MEURA TECHNOLOGIES, in the heart of the University-city. This gives Meura a dynamic on-going programme of advanced researches carried out in collaboration with the University. MEURA TECHNOLOGIES optimises continuously the range of equipment offered by Meura and develops new technological solutions in order to reach and anticipate the needs of our Customers.

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The micro-brewery, designed for a capacity of 10 hl per brew, has been entirely manufactured and commissioned by Meura. Milling of the malt is performed with a two-roller mill. Brewing is achieved in the two vessels installed in the visible part of the pub: one lauter tun and one combined "mash tun / wort boiling kettle / settling tank". The four fermentation and maturation vessels as well as storage vessels stand in the basement.

The "Cuvée des Trolls"

Sweet and unfiltered beer with a fruity aroma and an alcohol content of 7,5° (7% vol/vol.), this beer produced by the Brasse-Temps is aimed mainly at the young people's market. The choice of a funny Troll as a symbol of the beer is not a coincidence: "This jolly fellow coming directly from the Nordic mythology evokes the feeling of meeting with good friends and enjoying their company over a beer", says Hugues Dubuisson... a really good atmosphere, of which Meura is proud to be a part.

Current News

PIVO 2002

► From May 19th to 24th, MEURA exhibited at PIVO 2002, in Sochi. We take this opportunity to thank all the people who have visited our stand.



▲ Alexander Tronnikov, Meura Representative for CIS, in discussion

Meura commercial seminar

► In May 2002 Meura organized in Belgium its 2nd Commercial Seminar dedicated to its representatives Worldwide: a unique occasion to discuss new technologies and reinforce team spirit.



▲ Robert Braekeleers, Sales & Marketing Manager

Meura uk



► High speed, reliability... and performance

Meura UK is sponsoring Team Minky Racing in the KRC British 2002 Endurance Championship.

Team Minky is based in same town as Meura UK and is run by the founder of the team, Paul Turner assisted by his brother Mark along with David Fairbrother, making up the teams 3 riders.

The team has 3 Yamaha R6 bikes (600cc) capable of over 170mph (275kph).

Two races of the championship have been run so far this year, with a good 4th place from the 1st round at Snetterton and hard fought 9th place in varying weather conditions at Pembry, placing the team 6th in class.

With each race lasting between 6 and 8 hours speed and reliability are essential, similar traits to that of the Meura 2001 Mash Filter with its high speed turn round and consistent performance in production of high quality and high yield worts.

The next two rounds of the championship are in August and September where high speed and reliability will yield further good results.

► Bike specification

- Make/Model Yamaha YZF R6
- Engine capacity 599cc
- Power 106 BHP at the back wheel
- Suspension Ohlins front and rear
- Tyres Dunlop
- Special features Quick release fuel system (refuelling by removing empty tank and fitting full tank - change time 10-12 secs)

BRAU BEVIALE 2002



► Nurenberg from 13 to 15 November 2002

Last year at Drinktec Interbrau 2001 Meura exhibited its revolutionary milling system: the HYDROMILL®. This year we kindly invite you to come to our stand and discover the positive results obtained with the HYDROMILL® installed at Rodenbach Brewery (see article on page 4)... an occasion to taste a fresh Belgian beer.

Hall 7, Booth n° 214

