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Welcome to Kitzingen!

GEA Brewery Systems integrates production equipment from Beckum/Westphalia in Lower Franconia

The manufacture of evaporation plants at GEA Wiegand is being relocated from the facilities in Beckum/Westphalia to the Kitzingen plant run by GEA Brewery Systems in Lower Franconia. This relocation signifies not only a bundling of know-how and exploitation of manufacturing synergies within the GEA Group, it also involves a move for manufacturing machinery and employees. The management and all the employees in Kitzingen welcome their new colleagues from Beckum and wish them all the best for the new start.

GEA Wiegand with its headquarters in Ettlingen near Karlsruhe is one of the leading manufacturers of evaporation plants for the concentration of all types of liquid foodstuffs, organic and inorganic solutions, and process water. As a result of the relocation of GEA Wiegand plant manufacturing, the apparatus used for evaporation will be manufactured at GEA Brewery Systems in Kitzingen in future.

Future-proof equipment

The patented evaporation plants have been built by GEA Wiegand since 1908. They include falling film and forced circulation evaporators, surface condensers, reboilers, condensers, separators, preheaters and tanks. These plants are also used for alcohol distillation, dealcoholisation of beer and for the production of malt and yeast extract. GEA Wiegand has an in-house research and development centre in Karlsruhe for developing new methods and for optimizing existing methods and apparatus. Here new applications can be researched and design data determined. The know-how for the technical design of the apparatus will continue to be provided by GEA Wiegand.

First orders already in progress

Buildings and floor space have been modified and re-designed for the manufacture of the apparatus. The former shipping building and part of the old steelwork building are available for the manufacture of the GEA Wiegand products; a permanent tent for the dispatch of the goods and a storage tent have been set up on open ground. The machinery needed for production in Kitzingen was dismantled in Beckum at the start of March, set up on the new site and fully integrated into the manufacturing process. All the necessary work is to be completed by the end of March. GEA Brewery Systems will ensure efficient production with the new



Main building of GEA Brewery Systems in Kitzingen



Evaporator developed by GEA Wiegand

colleagues and the related machinery. At the moment three orders are currently being processed in Kitzingen – two plants will go to customers in Germany and one plant to Santiago de Chile. Delivery is scheduled for March 2010.

Optimized market activities

New service structure of OOO GEA Process Engineering Russia

The service company OOO Huppmann Service was founded by Huppmann AG, Germany, in Moscow in December 2005 and is one of the leading companies providing maintenance services for brewery equipment on the Russian market. In January 2010, OOO Huppmann Service was integrated into OOO GEA Process Engineering (formerly OOO Tuchenhausen Moscow) as its service department.

The main purpose of this new service department of OOO GEA Process Engineering is to extend the range of activities, which will now cover not only the food industry, but also the chemical industry. Furthermore, this is an important step to optimize the activities of the GEA Group on the Russian market, where the group is represented by GEA Brewery Systems (Germany), GEA TDS (Germany), GEA Niro (Denmark), GEA Niro Soavi (Italy), GEA Filtration (Denmark) and GEA Wiegand (Germany).

Extended range of services

The main tasks of the service department of OOO GEA Process Engineering are to boost spare parts and components sales through the acquisition of new customers and to extend the range of services, particularly by developing the field of maintenance of automation systems and repair of special equipment.



In the future, OOO GEA Process Engineering Russia will provide a wide range of services



COMPACT-STAR™ in 3D view

Rittmayer “goes” GEA

Construction of a 50 hl brewhouse based on the new COMPACT-STAR™ concept

Successful start for the new COMPACT-STAR™ concept: Rittmayer Brewery in Hallerndorf orders a new 50 hl brewhouse from GEA Brewery Systems. The heavy demand at drinktec 2009 in Munich and the results of the subsequent market analysis prompted GEA Brewery Systems to develop this innovative concept.

Cost-optimized new development

The analysis of the brewing behaviour and the brewing capacity of medium-sized breweries resulted in the demand for brewing plants for quantities between 40 and 100 hl. Building large brewhouses smaller was not the issue. A new cost-optimised development was the objective – this was achieved by standardized, production- and cost-optimized vessel sizes combined with proven products from GEA Brewery Systems. The agitator paddle with its optimum streamlined shape for gentle mashing guarantees perfectly “lump-free” mashing-in of dry grist in conjunction with the pre-mashing system, which can be adjusted from the exterior. With the raking knives and flow-optimized run-off cones, the LAUTERSTAR™ technology provides for short lautering times and worts of excellent quality. The spent grains removal blade of hygienic design allows spent grains removal in times of around 5 minutes. The wort kettle is equipped with the energy-optimized JETSTAR™ internal boiler system. These components combine to make small state-of-the-art brewing plants.

CIP saves production time

The basic configuration COMPACT-STAR™ consists of a mash tun kettle, a LAUTERSTAR™ and a Whirlpool/wort kettle. With this combination up to 5 brews per day and a cast-out cycle of 4 brews per shift are possible. Dry milling and also wet milling with the MILLSTAR™ are not a problem for the small brewing plant, both methods can be used. An infusion and decoction mashing process is set up as standard.

The small brewing plant including product pipes is cleaned using a consumption-optimized CIP concept from GEA Brewery Systems. If the brewery wants to do without the conventional cleaning day and the caustic brew, highly-developed CIP philosophies as used on the “big” plants are possible. These processes ensure reliable cleaning of the pipes while production is still going on in the downstream vessel.

Cost-effective pre-fabrication

COMPACT-STAR™ is provided largely pre-piped and pre-wired, in a modular design or for open installation without a frame. As a consequence, erection periods are minimized and the costs on site reduced. In addition, there are no limits in relation to vessel finish and vessel appearance. COMPACT-STAR™ is rounded off by the GEARBOXX™ automation and visualization system from GEA Brewery Systems – a well-proven solution for the user-friendly control and monitoring of medium-sized plants.

Future expansion of the brewing plant is also possible without any problems. For example, by integrating a pre-run tank or installing a separate Whirlpool, the brewing sequence can be increased to 9 brews per day.

Successful new CIP concept

GEA Brewery Systems optimizes plant utilization at old-established Gutmann Brewery



CIP system in the Gutmann wheat beer brewery in Bavaria

The Gutmann wheat beer brewery in Titting, Bavaria, has been family owned and operated since 1855. Since 1913, wheat beer has been produced in Titting. Meanwhile, the Gutmann family has specialized in this type of beer and is still using the original traditional method. In addition to consistently high product quality, conservation of natural resources is an important issue for the brewery. This is laid down in the brewery's environmental management, which is certified according to DIN EN ISO 14001:2004. One of the objectives is the continuous reduction of energy and water consumption.

As part of these efforts, the CIP processes in the brewery were closely examined in 2009. GEA Brewery Systems, Kitzingen, presented its new CIP concept and demonstrated its advantages in a direct comparison with the existing CIP process. The previous CIP concept of Gutmann Brewery included automatic cleaning of the vessels in the following order: mash tun kettle 1, mash tun kettle 2, lauter tun, pre-run tank, wort kettle, Whirlpool. After cleaning of the brewing vessels, the pipes were cleaned with a manual caustic brew. The upgrade concept developed by GEA Brewery Systems provides for combined vessel and pipe cleaning, a caustic brew is not required.

Exact monitoring of the cleaning process

To allow a direct comparison, the Gutmann CIP system was prepared for the existing cleaning method in exactly the same way as for the modernized cleaning process and cleaning agents were dosed. In this way it was ensured that the CIP tanks did not only have the same concentration, but also the same temperatures and filling levels. After that, all counter readings in the process control system were reset (operating times of pumps, water meters and flow meters for detergent concentrates). For both methods, additional dosing of caustic and acid was required once between the cleaning steps to ensure cleaning efficiency. At the end of brewhouse cleaning, all cleaning agents in the CIP tanks were concentrated again to restore the initial situation and thus allow a direct comparison of the two different methods. The cleaning processes of both concepts were observed and documented. Occupation times, electric power consumption (diagram 1) as well as the consumption of cleaning agents (diagram 2), H₂O₂- cleaning intensifiers and water were determined.

Diagram 2:
Savings (%) of cleaning media
GEA CIP concept compared to existing CIP concept

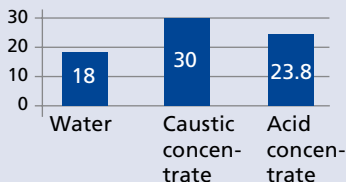
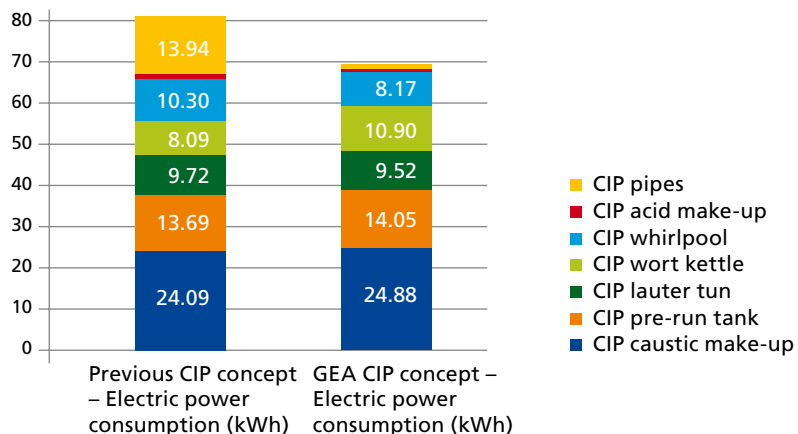


Diagram 1: Electric power consumption per CIP process



The comparison showed that after the CIP upgrade by GEA Brewery Systems the consumption of cleaning agents was reduced. The new constellation of the CIP areas also had a positive effect on the power consumption during cleaning. The higher energy consumption with the previous concept can be attributed to the caustic brew.

Resulting advantages:

The upgrade of the CIP processes results in a time advantage of about 3 hours. Now, the brewer does not need to be present in the brewhouse for these 3 hours, which allows customers to save labour costs. Furthermore, the new concept makes it possible to run production processes and CIP cleaning processes in the brewhouse simultaneously. If the brewery is interested in maximum equipment utilization

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Brewmaster Richard Hofmeier in the brewhouse

particularly in peak times, the greatest savings potential can be found there. As product-safety is ensured in the complete pipework of the individual plant sections, production can start earlier and additional capacities can be created.

Maximum product safety was one of the key requirements in the project. The innovative GEA Brewery Systems CIP concept is a useful instrument to boost production with only few mechanical modifications. In the final evaluation of the concepts, the CIP concept developed in Kitzingen had significant advantages in terms of energy costs and consumptions and increased plant availability at the same time. After preparation of the concept and order placement, GEA Brewery Systems needed only 4 months for successful execution and commissioning.

Conclusion

The modern CIP concept of GEA Brewery Systems meets the highest standards. Our experts guarantee product safety at any point of the process. Every upgrade is adapted to individual local conditions and customer requirements and leads to noticeable savings. Individual consulting and customer-specific configurations aim at low investment costs, fast commissioning and short downtimes.

Complete integration into the existing process control system ensures automatic and trouble-free cleaning and higher economic efficiency at the same time. The modern CIP concept of GEA Brewery Systems has proved successful in many plants worldwide.

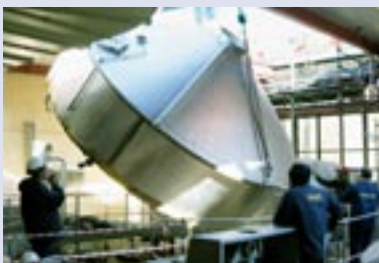
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Working all over the world

GEA Brewery Systems plants in Ulyanovsk (Russia) and Cape Town/Newlands (South Africa)

The installation teams of GEA Brewery Systems, its partners and customers are busy working all over the world. Major plants have already been completed in the Russian industrial city of Ulyanovsk, 900 km east of Moscow on the Volga, and in Newlands, a suburb near the centre of Cape Town.



Installation of brewhouse components in Cape Town, just a few kilometres south of the world championship stadium



Delivery of plant components in Ulyanovsk, the Russian twin city of Krefeld

Efficient use of raw materials in a brewhouse

Lauter tun upgrade at Molson Brewery in Montreal

In 2008 Molson's Montreal brewery was honoured by CIPEC for the monitoring of the consumption of valuable resources such as water, electricity and natural gas. In a second step the brewery wanted to optimize the brewhouse operation in 2009 with special regard to the raw materials used for beer production. The brewhouse is equipped with three lauter tuns manufactured in 1983.

A project team consisting of engineers from Molson Coors, Laporte Consultants and GEA Brewery Systems was established to execute the project and to modernize the lauter tuns in Montreal. Baseline trials have been carried out to define the extract efficiency of the existing equipment and the process. The parameter BME (brewing material efficiency) was fixed and used as a contractual parameter for the two main brands.

Minimum downtimes

The project consisted of a replacement of all knives in the lauter tun by double-shoe raking knives developed by GEA Brewery Systems and a significant modification of the control philosophy of the filtration process. The main concern of the brewery was the expected downtime for the mechanical installation and control system upgrade and the impact on the production process. A highly sophisticated program covering 4 weeks of installation and commissioning was worked out.

Thanks to perfect coordination of the mechanical work and commissioning, losses in capacity due to necessary downtimes were only 15 % in week 1 and 2 and 21 % in week 3. The fourth week was dedicated to the acceptance test, which was passed successfully.

Presentation at MBAA – Brewing Summit 2010

At this year's MBAA – Brewing Summit 2010 (Rhode Island Convention Center, Providence, RI, USA, 15 – 20 June), Fred Havel (Molson Coors Canada) and Udo Funk (GEA Brewery Systems USA) will present the project in detail. The impact of the modification on brewing material efficiency is shown including some statistical calculations. Finally, a ROI calculation for the lauter tun upgrade will be presented and the saving potential resulting from the higher lauter tun efficiency will be demonstrated. The modifications in the project will be illustrated in detail in a poster presentation. Mark this date in your calendar.



*Molson Brewery in Montreal,
Canada*



The IBD Convention 2010 / Asia Pacific Section is held from 14 to 19 March at Surfer's Paradise, Queensland, Australia



We provide comprehensive consulting on brewing technology during the IBD week

Prepared for dialogue

GEA Group at the IBD Convention 2010

This year again, GEA Group is one of the main sponsors of the IBD Convention – Asia Pacific Section. With this commitment we emphasize our longstanding partnership with local breweries and our regional presence. GEA Brewery Systems, GEA Process Engineering Australia and GEA Process Engineering New Zealand will present the GEA Group in several technical papers at the conference and also on the GEA booth at the accompanying exhibition.

Positive energy balance

The technical lecture given by Kristina Böe, Technical Director of GEA Brewery Systems Büchen, shows the energy saving potentials in the cold block of breweries. With rising energy costs and dwindling resources, the ecological optimization of production plants is an important issue. The brewhouse offers the greatest potential to cut thermal energy consumption. However, you can also take measures in the cold block to improve a brewery's energy balance with little financial investment.

Flash pasteurizers provide a number of potentials, if they are optimally redesigned to suit the filling temperature and if the efficiency in the recovery section is increased, a cooling section is not required. Furthermore, systems can be equipped with direct heating units, so that the hot water circuit can be eliminated. The optimum CIP concept, whether batch CIP, single-use CIP or a combination of both, together with modern detergents and cold cleaning strategies implies substantial saving potentials and reduces the impact on the environment. Further savings can be achieved by using energy-efficient motors and reducing compressed air consumers, which can result in a smaller compressed air system.

The above-mentioned steps with their respective ROI and the pros and cons are presented. In order to exploit the potentials of modern control and data acquisition systems regarding the energy consumption of components or sections, adequate arrangement of the consumers has to be ensured already in the engineering phase and appropriate instrumentation has to be installed. The implementation of the described measures requires an intensive dialogue between the breweries and experienced plant manufacturers in order to take all local conditions into consideration and to develop a solution that is tailored to the specific requirements. Audits that have been conducted in various breweries will be presented and the technical and financial results will be discussed.

We look forward to having a constructive dialogue with you on our booth no. 41-42. For further information on the event, please visit www.ibdasiapac.com.au

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Come and meet us!

GEA Brewery Systems is participating in a number of events in 2010. Check out the schedule below. We would be pleased to meet you personally at one of these events:

Time	Event	City, country
March 14–19, 2010	IBD Asia Pacific Convention	Queensland, Australia
April 7–10, 2010	Craft Brewers Conference (CBC)	Chicago, USA
April 13–16, 2010	Trends in brewing	Ghent, Belgium
October 18–20, 2010	IBC International Brewing Convention	Manchester, England
November 10–12, 2010	Brau Beviale	Nuremberg, Germany

Imprint

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