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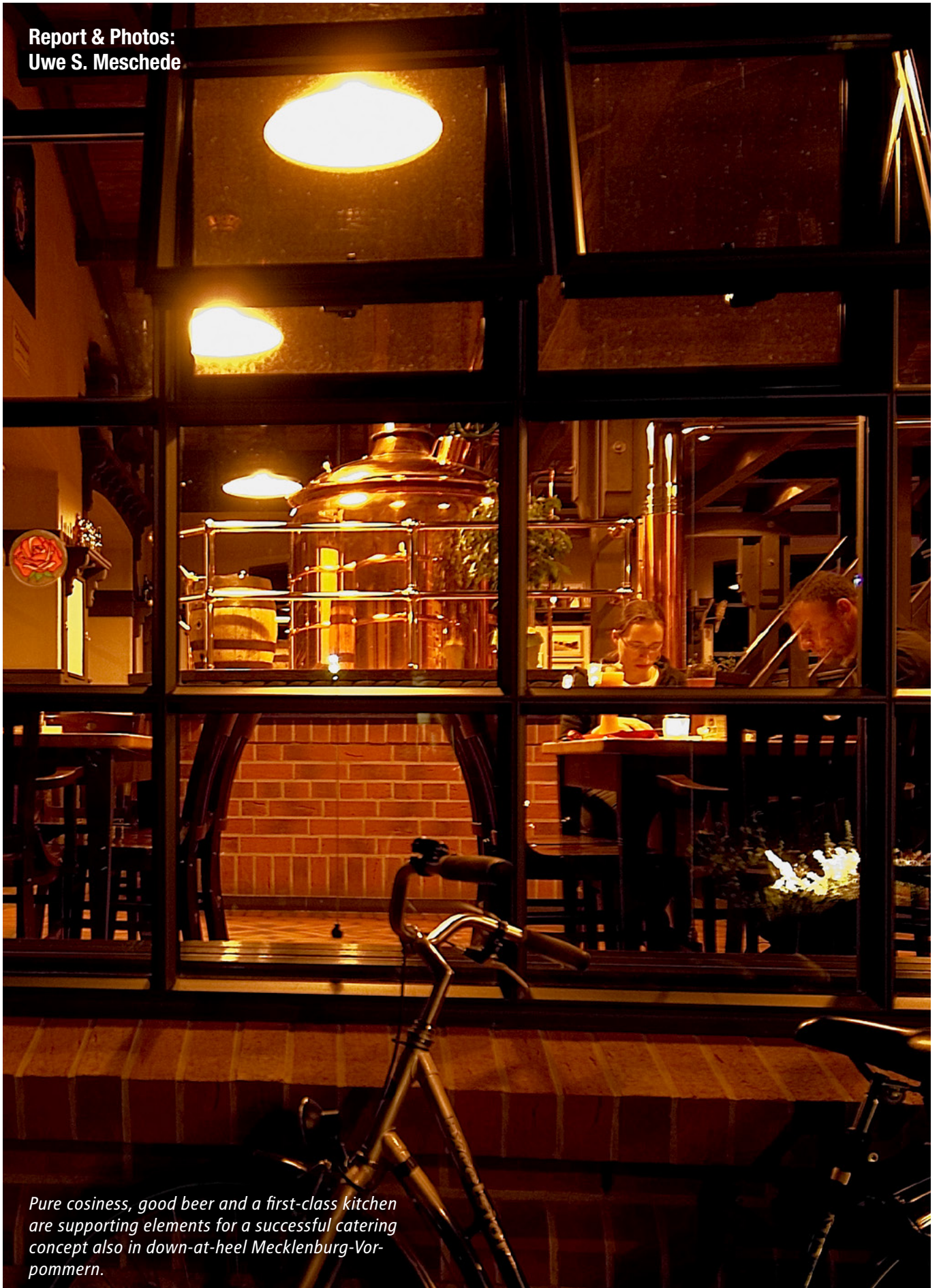


Practical Report Pub Brewery

A heart for Hops and Malt

*How a small pub brewery mastered
its wastewater production in a virtuoso way*

Report & Photos:
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Pure cosiness, good beer and a first-class kitchen are supporting elements for a successful catering concept also in down-at-heel Mecklenburg-Vorpommern.



The senior citizens, who have just arrived in two buses, wait impatiently for their lunch and drinks and put waitress Daniella under absolute stress (this photo). - As soon as the sun is high in the sky, the beer-garden season begins – also in Vielank (photo below left). - It tastes best fresh: Vielanker “Dunkles” (photo below right).

Here, confirmed beer drinkers get their money’s worth fully! “Vielankers”, these are namely not only the people who live in the tiny village of Vielank but also five types of beer, which have been produced for almost four years in the Vielanker brewery and are enjoyed by guests from far and near: Pils (Pilsner), Dunkles (brown ale), Schwarzes (stout), Weizen (white beer) and Doppel Bock (very strong German beer). And, against the trend in the branch, things are growing rapidly in the pub brewery – as with its wastewater production also...





Cosy: The Vielanker Brewery Hotel, sited some 200 metres from the brewery, offers overnight guests snugly furnished rooms with shower/WC and television. Absolute peace guaranteed!

„If the world goes under then I will move to Mecklenburg, because there, everything happens 50 years later.“

Fürst Otto von Bismarck

Griese Gegend (grey country), that's what they call the area around Vielank, a small community in the rural district of Ludwigslust in the southwest of Mecklenburg-Vorpommern in Germany. "Griese" means "grey" and one suspects that it is the mainly sandy, grey soil, which the ice age left here, which led to this description. But thousands of summer holidaymakers and day trippers appear not to find the tiny village, which is only ca. 15 kilometres from the River Elbe near Dömitz, so grey. Even bus companies in the meantime plan the some 800 inhabitant village, which looks back on almost 600 years of history, firmly into their tours through the country of Gerhart Hauptmann, Ernst Reuter and Otto Lilienthal. Object of the visitor appetite is, however, not art, history or culture but plain and simply the Vielanker brewery. Already in the 18th century today's brewery, which lies in the Lindenplatz

in the centre of the village and directly next to the voluntary fire brigade, is a place of conviviality and a central meeting place for the villagers. However, over recent decades, the pub has more or less pottered along, until the Düsseldorf businessman Kai Hagen plucked up courage and purchased the tumbled down property in his father's home village, rehabilitated it completely and, in 2000, made it again into a hospitable meeting place. The Vielanker brewery, within a radius of several hundred kilometres, is today a real insider's tip. There is outstanding food, for example a metre length of loin ribs and, since 2002, even fresh beer from its own house brewery. And for those who have enjoyed too much beer there is accommodation in the Vielanker Hotel, which belongs to the brewery and was opened in 2004. There are 52 beds in cosily and rustically romantically fur-

nished rooms available with every comfort. Now, daily, busloads of visitors arrive, to view the brewery, eat, drink and then drive on to the next attraction. And nearly every evening the 180 places in the restaurant are booked out. The brewery has, within good six months, become a firm celebrity in the region.

Still, it is not only the brewery itself which enjoys increasing popularity, the five beers also, which are brewed by two masters brewers, – naturally according to the German purity law of 1516 – are responsible for the unlimited growth in this otherwise poor-growth region. In addition to own requirements the good relationships with local commerce, contracts with other caterers and its own sales vehicles it enjoys an impressive annual production of some 10,000 hectolitres, which are produced in two brewing room and are filled into oak barrels, party cans and bottles. Kai Hagen is a visionary and has cultivated something big. He started with ten employees. In the meantime it is now over 60: in the own workshop, on the service side, in the kitchen and in the brewery. He enjoys working with the people of the grey country. Hagen's concept: the beer must

In the brew kettle, the crushed malt is mixed together with water at ca 45°C. After the malt starch has dissolved in the water the temperature is raised to just over 70°C – from the cereal starch results fermentable malt sugar.





„If the locals are happy then the tourist come as well.“

be taste good, the price must be right and one must do everything to keep the locals happy – then the tourists will come. And the locals ARE happy! That the environment can be rapidly impaired with so much conversion and new building is without doubt. Not so with Kai Hagen. He constantly kept a watchful eye on the smooth integration of his operations into the natural surroundings of the village, he constantly thought about the protection of the environment in his adopted home. Thus the large beer garden harmonises with the village square opposite, thus new and old buildings form a seamless unit, thus the Vielanker Hotel, designed as a large farm cottage, is an integral part of the village scene.

One of the greatest challenges in this connection was the environmentally

appropriate handling of the wastewater that, with an enterprise of this order, is to be mastered – an enormous quantity, its composition and the production in surges. Truly a task for specialists!

The recording of the actual status was then also the first and most important part of the planning of the required wastewater treatment system: composition and quantity of the wastewater in the brewery area, number and utilisation of the seating in the restaurant, number and utilisation of the seats in the beer garden, type of the kitchen operation, number of employees etc. As at that point in time an expansion of the brewery operation from one to two brew kettle rooms with a tripling of the output and an investment volume of ca. two million Euros was also

From the kitchen come fats, detergents and a great deal of organic wastes which load the wastewater enormously and make a grease separator upstream of the wastewater treatment plant inevitable.

in planning, it meant that all this expansion also had to be taken into consideration in all its nuances.

In collaboration with Kai Hagen's general building contractor as well as an engineer office from Sachsen-Anhalt a detailed performance specification was produced from this comprehensive catalogue, which listed all requirements on the future wastewater treatment plant and represented a binding basis for work for the ATB engineers.

The concept resulting from this foresaw that the plant should be built on a pasture, belonging to the hotel, on the outskirts of Vielank – ca. 50 metres behind the hotel, over 250 metres from the brewery and without impairing the environment and surroundings. Kai Hagen agreed the concept with enthusiasm.

The comprehensive preparations started in February 2004: cubic metre upon cubic metre of earth was removed, tanks were built, pipes and drains were laid and the technical plant was built and pre-assembled in the ATB works. At the beginning of October 2004 it was at last ready: the plant could be installed.

The wastewater is channelled via various inlets from the brewery and the catering operation into an existing old cesspit in the vicinity of the operations complex. An extremely efficient pump station makes it possible for the wastewater to bridge the ca. 250 metres up to the new wastewater treat-



Wastewater is also abundant in the filling area. Following return, the bottles with returnable deposit are washed with plenty of fresh water. Thereafter they are refilled and closed by hand. Now they are once more "showered" and freed from residues of beer which have overflowed. Finally, the bottles are wet-labelled.

ment plant behind the hotel and delivers it into the coarse screen of the plant, which consists of 11 tanks. Due to the enormous variations in the catering area the heavy utilisation due to the brewery operation as well as the widely differing composition of the wastewater to be dealt

One of the greatest challenges was the environmentally appropriate handling of the wastewater.

with, ATB has installed system engineering which, even in extreme periods offers a very high operating safety: AQUAMAX® XLS5 for up to 850 PT – with two coarse screen tanks, two buffer tanks, five SBR tanks with integrated sludge liquor return. The complete control was installed in a former equipment hut directly alongside the plant.

Following the SBR process the treated wastewater, in peak periods still up to 125 cubic metres per day, runs into the neighbouring stream and is fed back again into the environment. In the meantime, almost two years af-

Specialists enthuse over first-class effluent values and authorities call the AQUAMAX® plant as ideal reference project.

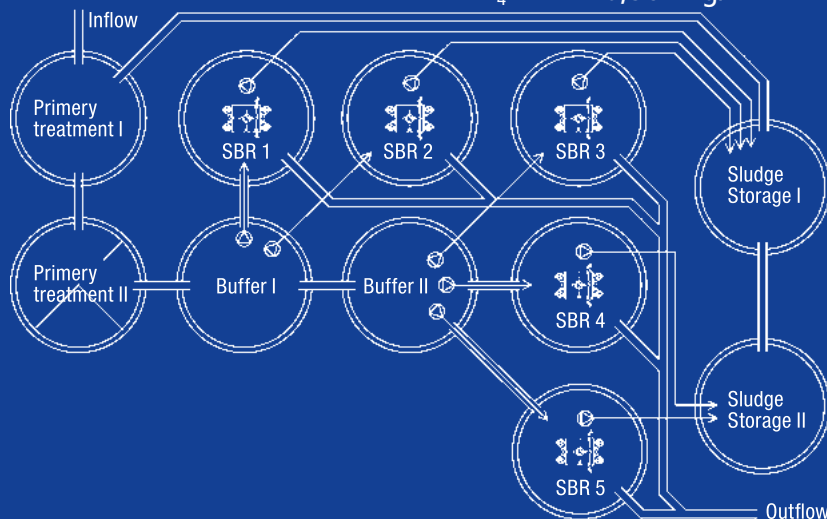
ter commissioning the plant, the Vielanker brewery is no longer regarded as exemplary only in the matter of beer, gastronomy and the hotel business but also for wastewater treatment: specialists enthuse over first-class effluent values and authorities call the AQUAMAX® plant as ideal reference project. With this project Kai Hagen once again gets his money's-worth.



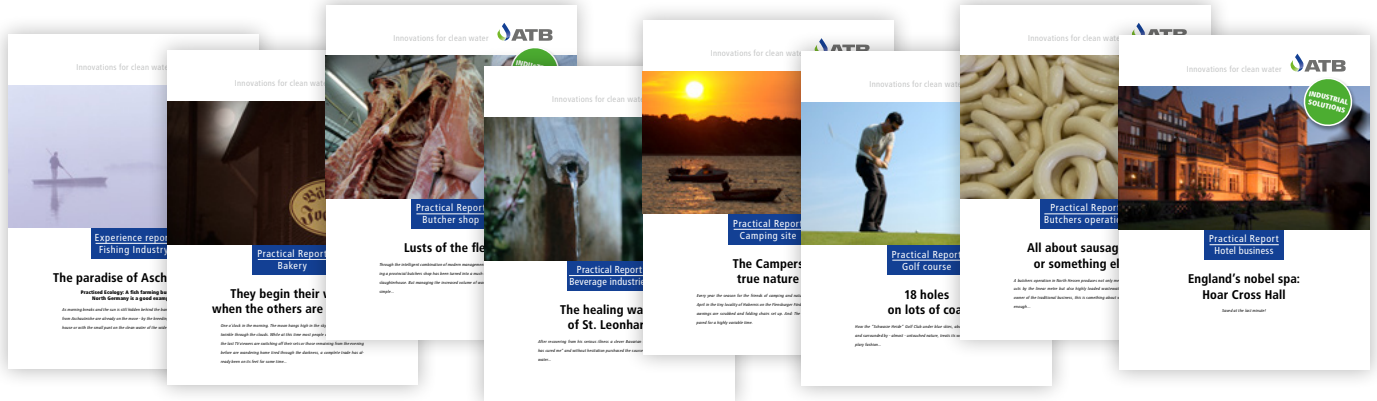
On the pasture behind the brewery (in the background) are to be found the 11 tanks belonging to the wastewater treatment plant as well as the old equipment hut, which today accommodates the complete plant control.

The brewery project at a glance:

Owner	Vielanker Brauhaus GmbH & Co.
Project management	ATB
Plant size	AQUAMAX® XLS5 - 850 PT
Costs of plant technology	Ca. 75.000,- €
Commissioning	October 2004
Required treatment performance	COD < 110 mg/l BOD ₅ < 25 mg/l NH ₄ N < 10 mg/l
Effluent values	COD < 73 mg/l BOD ₅ < 3 mg/l NH ₄ N < 0,38 mg/l



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