

Great Engineering for Gourmets

New fruit cooker fully integrated into the Leppersdorf Müller Milch fruit kitchen

It was some years ago that a far-sighted decision was made at Müller Milch: the fruit preparation for the high-turnover yogurt and fruit drinks of the company was henceforth to be manufactured by the company itself. This guaranteed independence from delivery dates and delivery quotas. Above all however there was a chance to raise margins. It was thereby clear that only an efficient, highly integrated plant concept could be considered. As a result Müller Milch has brought highly modern fruit kitchens into operation at three sites. And the bill added up – by expanding capacities, it could now become even better. That is why Müller Milch added one more thing. New milestone: one of the biggest fruit cookers in the world has recently begun operating at the Leppersdorf site near Dresden. It cooks fruit preparation from fruits of all kinds together with water, sugar and pectin. In principle just like on grandma's stove at home, but on a huge scale.

Demanding integration task

Those responsible for the project at Müller Milch knew of course that the job was not yet complete. For the aimed capacity push it needed much more, for in fruit cooking, only where all the necessary "ingredients" (together with all involved plants, systems and processes, so the entire production line) are exactly coordinated, can the recipe for success be correct. Already existing fruit cookers were to be included here just as much as sugar silos, Clean-In-Place cleaning stations and valve nodes up to tank storage of the finished fruit preparation. In other words, only an intelligent, fully integrated automation solution could really exploit all possibilities.

Teams with know-how

Müller Milch did not have to search for long for a partner to answer all these questions. A competent specialist has been available for a long time at ProLeiT, the systems vendor for automation software and automation engineering in Franconian Herzogenaurach (close to Erlangen). Since 1994 cooperation has been proven with regard to forward-looking process control

engineering in a multitude of projects, whether at the Müller plant in Leppersdorf or in Aretsried in the Allgäu region. Cooperation with mechanical engineering experts from GEA Tuchenhausen, responsible for the installation of the fruit cooker, was also perfect on all sides.

The advantage of practiced cooperation within highly-qualified teams also became apparent within this demanding project. In this way the schedule could be clearly undercut: after beginning assembly, step-by-step installation in Leppersdorf was begun. The sterile test and first product run followed a week ahead of schedule and only 4 months later the installation had already been successfully completed, more than two months ahead of schedule. The intensive Factory Acceptance Test at ProLeiT together with experts from all three teams also paid for

INFO



Company:	Molkerei Alois Müller GmbH & Co. KG
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Whilst the market and turnover of dairy farming is stagnating today in many places, some companies continue to grow. And – they all consistently utilize modern automation engineering. The Müller Milch group has a prominent place among them. The latest proof is the new high-performance fruit kitchen at the Leppersdorf site near Dresden: with one of the largest fruit cookers in the world and fully integrated processes, from the sugarsilo right up to tank storage and Clean-In-Place cleaning station – supported by ProLeiT system specialists.

application profile

tselt in the end. A full two weeks was left to test and optimize the program flows, procedures and recipes in all facets. As a result however this minimized the on-site adaptation expenditure enormously. The bottom line therefore: much time and cost was saved.

System engineering

The task of system engineering at Müller Milch consisted of the expansion of the fruit kitchen controller together with the comprehensive and seamless connection of all associated plants and systems. Basically these are:

- New fruit cooker
- Integration of existing fruit kitchen
- Sugar silos
- Valve (fruit) nodes
- Clean-In-Place cleaning station
- Integrated process control engineering, with all control processes, operator control processes, monitoring processes, materials management and recipe administration, visualization and archiving.

In this way things could be built without problems on the basis of the existing ProLeiT system software. For the ProLeiT Plant iT component-oriented process control system used for years at the Leppersdorf site guarantees flexibility in every direction thanks to an integrated open system architecture, just as with all other software packages from the ProLeiT Plant iT system family docking to it.

A peculiarity at Müller Milch generally: for batch-controlled processes (of vital importance in the fruit kitchen with the functions of recipe administration and materials management) a special version of the ProLeiT batch program was brought in. With the program previously customized to the special requirements at Müller in many detailed sequences, the manufacturing process was hierarchied, i.e. the administration of sequences required in the manufacturing process of ProLeiT Plant Liqu iT is subordinate to the batch system. Plant Acquis iT, responsible for the seamless acquisition of process, machine and operational data was finally decided on as the production data management system.

Equipped for all eventualities

Müller Milch achieved all of the aims of the expansion project with this concept. Firstly, production capacity at the Leppersdorf fruit

kitchen was doubled, i.e. all options for more growth were accomplished. Secondly, the project could be implemented in the shortest time almost without interruption of production. And last but not least there is a highly solid automation platform which is upgradeable at any time for all future needs. Müller Milch Project Manager Mr. Kösters stated with satisfaction: "Respect is deserved as to how quietly the whole thing was done – and that's always the best sign!"

Great Engineering in the Fruit Kitchen

Modern automation and 100% increase in production capacity – with ProLeiT software and know-how:

- Plant iT, the system software for process-wide management of all processes;
- ProLeiT batch program for recipe administration and materials management – with customizations according to requirements
- Plant Liqu iT, the program for exact step sequences – running subordinate to the batch system rather than autarkically
- Plant Acquis iT – seamless management of operational data
- Additional components from the market leader: Step7, SQL Server, Visual Basic