The history of walls and ceilings

Protecting our food has been an important issue since we lived in caves and needed to keep the wolves away from the latest mammoth kill. As time progressed life became more complex and society's expectations of how best to protect our food were raised.

As materials were developed, such as brick, mortar plaster and tile, they were combined to form food preparation areas thought to be suitable at the time.

The kitchens of large houses and palaces were laid out to make the preparation, cooking and storing of food more easy to carry out. Some were designed to feed several hundred hungry mouths throughout the day. The main objective was ease of working within the technology of the day and protection of the food from pests and from theft by the staff.

Future contamination

The ideas of contamination by bacteria and from environmental sources were still things of the future. Food was rarely left lying around for long and the occasional lump of plaster from the ceiling was a source of amusement to all who did not break their teeth on it.

Hygienic and cleanable surfaces are prerequisites for the EU licensing of certain food processing premises.

Modern walling systems facilitate a safe and hygienic environment.

The fact that the walls and ceilings may have been made using wattle and daub was of no real consequence. No thought would have been given to the technique of mixing mud and manure from all sources to make a pliable wall and ceiling covering that dried hard and was then coated with a lime wash finish.

As the wash was reapplied over a period of time it got thicker and traditional plaster takes this further, being built up using lime mortars.

Over the last 130 years cement has come into use and has become more predominant as a material for plastering in the last 50 years because it is a quicker and less labour intensive material to use.

As an increasing number of the population began to rely more and more upon others to make and distribute their food the presentation of a clean shop or kitchen preparation area became important.

Tiled floors and half tiled walls were used but the benefit beyond the aesthetic was that they could be easily cleaned by the staff. The area above the tiles might be plastered and painted at a time when lead was a common ingredient in the paint.

In the food factory environment there would be more extensive use of wall tiles from floor to ceiling in the critical areas.

We use the term 'ceiling' loosely because this was often an open void up into the roof space where the structure and services were visible along with their accumulation of dust and cobwebs.

Galvanised metal sheeting was often used in critical areas such as back splash boards, and this might be smartened up from time to time with a lick of paint.

Modern walling systems

The advent of the modern walling systems for hygienic food environments has taken place only in the last 20-30 years and this has been in parallel with the developments in hospitals, recreation areas, such as pools and gymnasiums, and in public areas where the need for cleanliness and resilience is essential.

Early government regulations for the food industry established the principles of hygienic and cleanable surfaces in food envi-

Continued on page 15

Continued from page 13
ronments and these were extended in the prerequisites for the EU licensing of certain food processing premises.

Continuous improvements

Year by year and industry by industry these requirements have become all encompassing for anywhere preparing, producing and handling food. At the same time the means and methods have improved.

These improvements have been developed and pushed through by companies such as Be-Plas Marketing Ltd who are now celebrating more than 25 years in business.

"When I started back in the early 1980s there were relatively few hygienic food premises by today's standards," Steve Shaw, managing director of Be-Plas, told International Food Hygiene.

"Some of the problems were because the old ideas of hygiene were just not up to the job and the passage of time had made things worse."

"You would see sheets of plywood put up on a frame and then tiled over. But the water would get into the wood and it would be useless unless you happened to be a bacteria looking for a nice home."

Back in the 1980s new materials were just becoming readily available based on more hygienic plastics.

Companies like Be-Plas were developing techniques of installation that were quicker and more effective. They were not only water proof, wash proof and bacteria proof but they were more cost effective over the years of service they gave.

The opportunities were there because of the demand for better solutions to satisfy the increasingly stringent regulations and the expectations of the food producer's customers.

The need to improve and innovate was second nature to Be-Plas, which is probably a major reason why the company has continued to thrive.

Leading the way

Be-Plas are leading the way in finding answers to difficult questions. For example, it is all very well having hygienic sheeting but how do you fix them without creating more dirt harbourage? When the early materials were liable to damage from passing machinery something tougher was required.

Be-Plas were the first company to use embossed fibreglass reinforced plastic panel systems for the hygiene industry and it is still the most effective material because it not only offers the highest hygiene standard, but it also proved to be an answer to the requests for a fire rated cladding system which develops low amounts of smoke.

"One of the many things I have learnt is that legislation never stands still," Steve told us.

"They have now banned the use of certain chemicals such as lead and cadmium in food areas and because such chemicals can be found in the glazes on tiles their use is in decline."

Having a wide variety of surface options has been a major strategy for Be-Plas, which is why their choice of materials includes Glasbord, Elite PVC and Elite CE.

The use of various plastics has not only changed the food industry in terms of raising standards in hygiene but also the way in which we think about hygiene.

Because some materials are available in a wide range of decorative shades, colour coding can be implemented in many factories to identify levels of risk in specific areas in terms of cross contamination and with regard to health and safety.

Today's hygienic wall cladding can also be made to withstand the temperature variances typically found in food establishments, such as refrigerated rooms and milking parlours.

The material can be worked upon more easily and fitted into awkward corners to create a completely hygienic environment which offers real assurance for the production of safe food.

It also provides high levels of chemical resistance so that stronger cleaning fluids can be used where necessary.

Suitable materials

Different plastics have differing properties, including variations in temperature resistance, flammability, toughness and other characteristics.

It is very important to use materials that suit the particular requirements of each specific building.

For example, plastic wall cladding is normally lightweight and easily handled, whilst the lightweight characteristic also minimises structural support requirements, which is a major consideration in wall cladding in food processing premises.

The hiding of all fixings is often thought of as an aesthetic factor, but even more important is the fact that it not only eliminates places for dirt to accumulate but it also creates an almost seamless transition from sheet to sheet.

"In 25 years many things have changed," Steve told us, "but the food industry is still as cost conscious as ever.

"Over the years we have found that the initial installed costs are in line with traditional tile costs, but what our customers tell us is that there are long term costs savings that can be enormous."

"The ease and speed of cleaning, the length of material lifetime and the low cost of maintenance all add up over years of service, which is part of the reason why customers like the British Airport Authority, McDonalds, Tesco and The Hard Rock Café keep coming back," Steve concluded.

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