HEAT AND CONTROL

CASE STUDY: POTATO CHIPS PROCESSING SYSTEMS

CAPE COD POTATO CHIPS

CAPE COD POTATO CHIP'S SMALL BATCH FRYERS DELIVER BIG OUTPUT IN LIMITED SPACE

How do you squeeze higher output from the same floor space used since 1980, without changing the quality of a winning product or ruining the charm of a popular tourist destination?

"We were space-constrained, and simply didn't have the ability to make the plant bigger with brick and mortar," says Jeff Newell, plant manager at Cape Cod Potato Chips (USA). "The project was based on the premise that the kettles we work with are the original fryers the brand started with. So our challenge was to replace those fryers without expanding the plant and still make the Cape Cod Potato Chips our customers love."

"The goal was to make the same product whether we have low-gravity potatoes or high-gravities, and do it with much higher throughput," reasons Newell.

Heat and Control's solution was to develop a new fryer based on its proven 800B platform, which closely matched the footprint of Cape Cod Potato Chip's existing fryers. Heat transfer tubes were positioned lateral to product flow with BTUs provided by a new combustion system. To preserve floor space, combustion components were mounted above the fryer, instead of beneath it.

Cape Cod Potato Chips had utilised separate exhaust hoods mounted six feet above each of the old fryers, although these area hoods pulled a large amount of draft air from the cook room. The new fryers would pull up to 30% more air, and add nearly a million dollars to the project for additional air makeup equipment if a similar approach was used. To save energy, Heat and Control equipped each fryer with a hood enclosure, like those commonly used on continuous fryers. In addition to reducing draft air volume to below 1,700 acfm, the hoods blanket the oil with steam, purging oxygen to improve oil quality by reducing oxidation.

"There is an improvement in product appearance. And because the BTU conversion is so powerful in the new fryers, I get a searing effect early-on in the batch cycle which holds the chips to the right number of fold-overs and a good cup shape," says Newell. "Texture change is neutral," he adds, "which is a good thing. The fact that I'm making significantly more product in the same size of equipment and not sacrificing any texture is a huge positive."

www.capecodchips.com

ABOUT HEAT AND CONTROL

BENEFIT FROM OUR GLOBAL EXPERIENCE

HEAT AND CONTROL is a world leading equipment manufacturer of food processing and packaging systems.

Our global team can support you with equipment demonstrations, engineering and applications assistance, project management, installation, training, service and spare parts support wherever your plant is located.

PROCESSING, PACKAGING AND INSPECTION

Turnkey solutions offering a single source of supply

Being a single source supplier allows us to provide holistic solutions designed and manufactured specifically to meet the requirements of each individual customer now and in the future.

In order to provide our customers with the best solutions, we work with the world's leading inspection equipment manufacturers, including Ishida and CEIA.

With a team of expert engineers and service technicians, we partner with our customers every step of the way, from design, to onsite training, as well as future servicing and maintenance. Our thought leadership within the industry and ability to provide solutions for all steps of the manufacturing process ensures our customers have the highest level of flexibility, investment security, consistency, and success.