



News from the Network

Gas Foodservice Equipment Network

Fryer Performance: An Inside Look

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Last month, we focused on the importance of oil filtration as one of the most effective means to improve the hedonics (subjective quality and appearance) of your food items and increase your bottom line. This month, we'll look at some other findings from that fryer test conducted on behalf of a well-known national chain and see how different fryer efficiencies deal with those CP's (carbonized particulates) that ultimately affect oil longevity and food quality.

It's no secret that there have been significant improvements in gas fryer technologies over the past several years. The days of a metal fry pot with flames impinging on the sides and bottom are now nearly a thing of the past. The illustrations included in this article point out several new and innovative ways that gas fryer technology has brought the art of cooking to a new level. New heat exchanger configurations direct more heat into the oil where it belongs, thereby cooking product faster, increasing production and enhancing the hedonics of the finished food product.

Higher Efficiency Equals Better Products...

During the test, we evaluated five popular fryer brands. Each showed different results as far as heat exchanger efficiencies are concerned. Of particular interest were the vast differences in flue-gas temperatures, which are a good indicator of overall fryer efficiency. Our test measured temperatures from a peak of 509°F (Fryer A) to over 1150°F (Fryer E). We were also able to actually see a computerized visual of how the burners were firing and for how long. This correlated to the ability of the fryer to maintain proper temperature recovery to maximize food production, reduce oil loss and consistently produce a high quality finished product.

The charts show how Fryers A and B performed with the highest efficiencies (low flue gas temps) and a smooth and somewhat "modulating burn" to maintain temperature and basically recover

instantaneously. When looking at these factors, one could assume that these fryers would produce the best overall quality product, and, upon review of the finished products throughout the 30 minute heat lamp hold, they in fact did!

Maintenance Concerns...

A comprehensive cook test of this nature can also reveal the frequency of maintenance issues down the road. Take for example Fryer D, which showed a significantly more frequent firing rate than any of the others ranked in this test; 44 times during the one hour test period. Compare that to Fryer C which fired only 9 times during that same time frame.

With Fryer D having so many burner-on, burner-off cycles, one could correlate that to future gas valve failures, thereby increasing maintenance costs, which may decrease production and ultimately have a negative impact on your bottom line!

In review of service records from a series of operators who used this type of fryer, guess what...we found our hunch to be true. Fryer D has a history of higher maintenance costs than any of the others evaluated in this test.

Another Look at CP's...

As we discussed in last month's article, a faster recovery fryer will produce less carbonized particulates in the frying oil. But one actually needs to see how this phenomenon can vary from fryer to fryer. The unretouched photographs in this article do just that; Fryers A and B, our highest efficiency units with lowest flue-gas temperatures and virtually instantaneous recovery, had the least amount of CP's deposited on the burner tubes.

Fryer C had a manageable amount, while Fryers D and E showed excessive deposits. And yes, produced the worst food hedonics due to increased oil absorption into the food product itself.

The most significant finding for this chain was that their long-time standard fryer did not perform well in the tests. They are now in the process of changing their specs to a fryer that may cost more up

front, but will produce a better product, consume less oil and energy, and have a significant impact on their bottom line.

As our tests showed, not only does gas give you more for less, gas incorporates innovative

technologies that address maintenance and hedonics issues for a more efficient foodservice operation!

If you would like to learn more about this test and the brands of fryers evaluated, call me: 704-731-4357 or e-mail me: tom.stroozas@piedmontng.com. 

