

National Account Case Study: the Turbo Pot

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Gas Range is (Not) Efficient



70% efficient on
electrical ranges



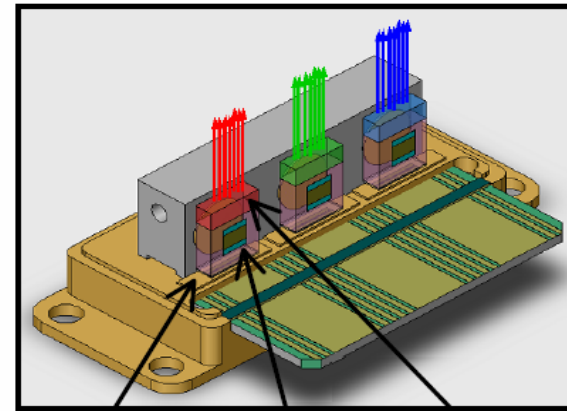
50% efficient on
gas ranges

Gas Cooking is (not) Efficient



Hot flame/air escapes from the side of a cookware without effectively exchange of heat to the pot. It is scorching hot if you place your hand beside the pot.

Reverse Use of a Heat Sink



NECSEL array
on heat sink

PPLN

Output
Coupler

Heat sinks are used to cool computer chips by spreading heat to the air

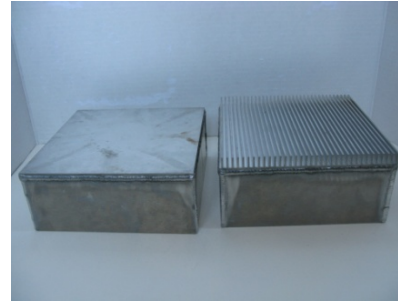
Reverse use of a heat sink to collect the heat from the flame



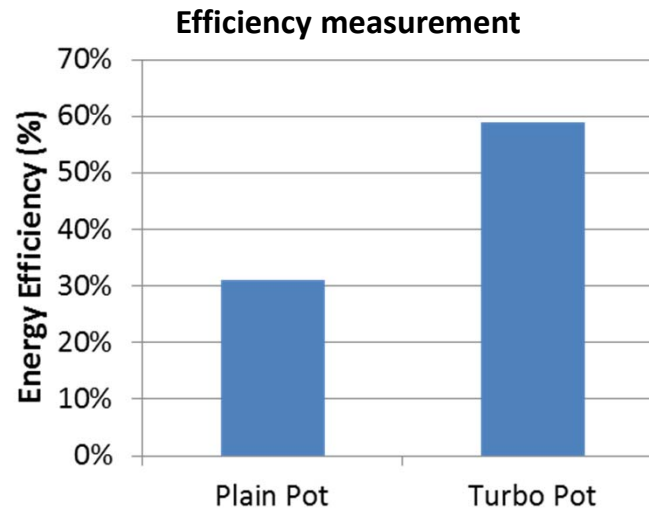
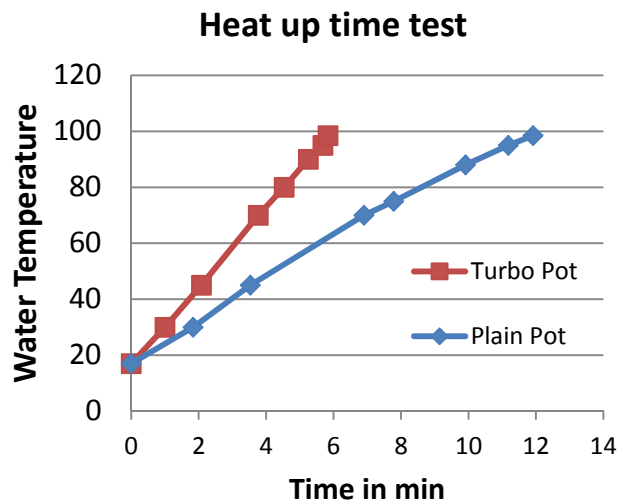
Putting a Heat Sink on a Pot

1. Proof of concept
2. Prototyping
3. FSTC verification
4. Product designs
5. Manufacturing process development
6. Scale up
7. Cost reduction

Considering: needs to be low cost, flexible for different sizes, simple, environmentally compatible



Improvements



- 1. Heat up time shortened by 30%-48% depending on the range types and setting**
- 2. Efficiency improvement by 60% to 80%**
- 3. Gas range only**

Fishnick tested and reported on www.fishnick.com

Other utility companies also verified the performance.

Benefits

- Saving time means increased productivity
- Reducing energy use means reducing energy bill
- Fast heat up time can preserve freshness of food, especially while cooking in large quantities
- Fast cycle time allows better service to more satisfied customers



Return of Investment

For the customer:

Return of investment is typically less than ½ year in commercial kitchens



For the environment:

It takes some additional energy to make heat sink on the pot:
~20kWh

this extra energy used can be reclaimed in 8hrs use of the product.



Case Study 1

Carrabba's Italian Grills

240 restaurants nation wide

\$800 million revenue company



Open burners with pots cooking pasta to orders

4 hours continuous operation daily

Like to reduce energy cost with Turbo Pots



Reduction of Energy Use

Burner A

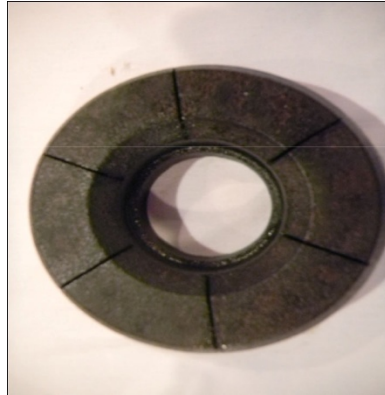


33kBtu/hr de-rated to
15kBtu/hr
Saving \$194 each year



Reduction of Energy Use

Burner B



30kBtu/hr de-rated to
15kBtu/hr
Saving \$162 each year

Two Pilot Sites

St Pete Site for over **1 years**

1951 4th Street

St Petersburg, FL 33704

727-897-9375



St Lucie Site for over **9 months**

1900 S.W. Fountainview Blvd

Port St Lucie, FL 34986



Chain Roll Out of Turbo Pot June 2010



www.eneroninc.com



ROI of Turbo Pot At Carrabba's

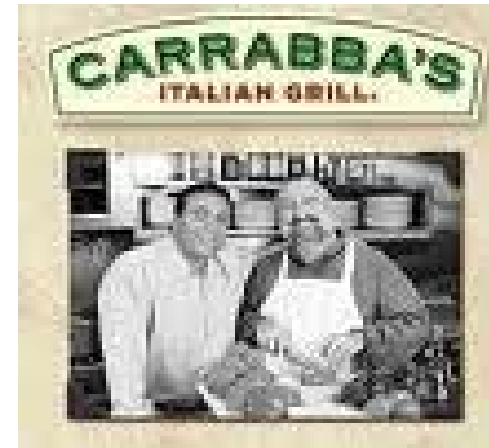
For the customer:

Pot cost delivered \$100
with some de-rating cost

Type A: at \$194 6.5 month ROI

Type B: at \$162 9 month ROI

Greener Restaurant



For the environment:

A reduction of several million
pounds of CO₂ emissions.



**For the environment, report huge
savings after 1 year of use.**

Case Study 2

The Cheesecake Factory
156 restaurants nationwide
\$1.3 billion revenue company

The Cheesecake Factory has
notoriously long waiting lines
in their lobby. (Even David
Letterman jokes about it)
Like to improve their kitchen
throughput with Turbo Pots



Diverse menus, gourmet cooking to orders

Use Turbo Pots and pans in all
7 new openings of 2011
No reduction on the burner
power, use the Turbo Pots in
speed mode

78x 10" fry pans

24x 8" fry pans

5x 40qt stock pots

3x 32qt stock pots

...



Case Study 3

Panda Express

1300 sites nation wide, with
1.3 billion dollars revenue

Their kitchen is very simple in term of
cooking equipment:

3 woks, one fryer and one water pot.

The water pot is on 11 hrs/day, SoCal
Gas identified and recommended
them to use Turbo Pots



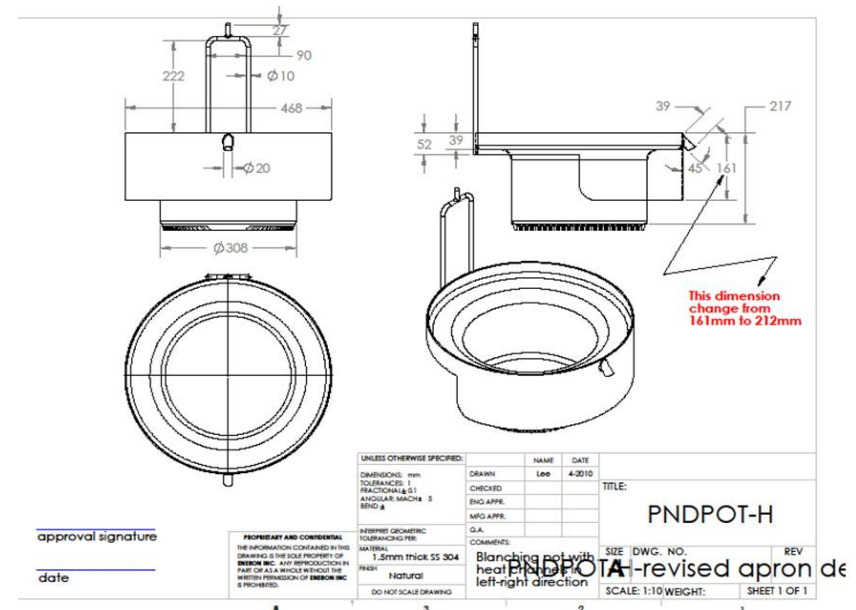
Reduction of Energy Use

Cut the rate 125btu/hr duck bill burner down to 70btu/hr

Optimizing the flame pattern

Optimize the distance between the pot and the burner

Other retrofits on the burner reduced the need to run cooling water.



ROI of Turbo Pot At the Panda Express

For the customer:

The retro fit project will cost about ~\$570 total including Turbo Pot cost, and South Cal gas rebate some amount that will cut the cost down to about \$300.

Saving for such improvement will be easily \$3/day gas saving. That will be \$1000/year savings making ROI in several months.

For the environment:

Once it is fully retrofit, the whole chain will reduce CO₂ emissions by over 10 million pounds annually.



Turbo Pots are new, yet proven.

The Turbo Pot technology is versatile, exemplified by the different uses in different national chain accounts.

For the chain audience:

Please consider Turbo Pots as your new tools for energy saving and improving productivities.



For the utilities audience:

Please bring the message to your customers that the Turbo Pot will improve their productivity, reducing their gas bill, ultimately improving their bottom line.

Please consider a rebate program or other promotional assistance to promote the Turbo Pot in your area.



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Acknowledgement To

PG&E FSTC, SoCal Gas, San Diego Gas & Electric, and Energy Trust of Oregon for their continuous support.

ESC for the Opportunity to share our experience in reducing CO₂ emissions with the Turbo Pot



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