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SUMMER 2005

Editor: Max Carthew Associate Editor: Julie Wallis

Quote of the Month:

"Self-discipline is when your conscience tells you to do something and you don't talk back."

-W.K. Hope

? Ask Dr. Brush

Contributed by:
Max Carthew
C.E.O.

SMARTAIRE SOLUTIONS ®
Searching for a better way to build a Spray Booth.

Many of our readers are aware that OMEGA and HM White developed a novel new spray booth ceiling design back in 1999. This was in response to a need for improved control over the air distribution for Bell application zones. The new filters provide laminar air flow and the ability to profile the air within a zone for ideal operation.

We know from testing by the paint applicator companies that highest transfer efficiencies and best film build uniformity is achieved with empty booth downdrafts of 50 to 60 FPM plus/minus 5 FPM.

Unfortunately the current technology used by manufacturers rarely approaches better than plus/minus 10 FPM so we are limited in the gains we can achieve.

We have seen renewed interest in the **SMARTAIRE SOLUTIONS ®** ceiling filter as many paint operations are using fixed and robot operated Bell application technology and there is a continuous need to improve painting efficiency. This is also driven by today's high cost of paint and energy.

It is not so well understood that this technology offers significant energy savings opportunities as well. Savings come from the potential to reduce downdraft by better control, plus the low overall system pressure drop compared with current designs.

We have calculated that for a typical 30 foot by 17 foot zone fitted with the patented **SMARTAIRE SOLUTIONS ® ceiling filter,** we can save up to $30,000 annually on energy costs.

The attached photos show a typical 24 inch by 48 inch **SMARTAIRE SOLUTIONS ®** filter**.** Note the intake damper for customizing the downdraft within the zone.

Natural Gas Rate Increase – Case Study

With the rising natural gas rates, projects or initiatives that may have been declined or deemed not feasible might be very rewarding and attractive capital projects under today's settings.

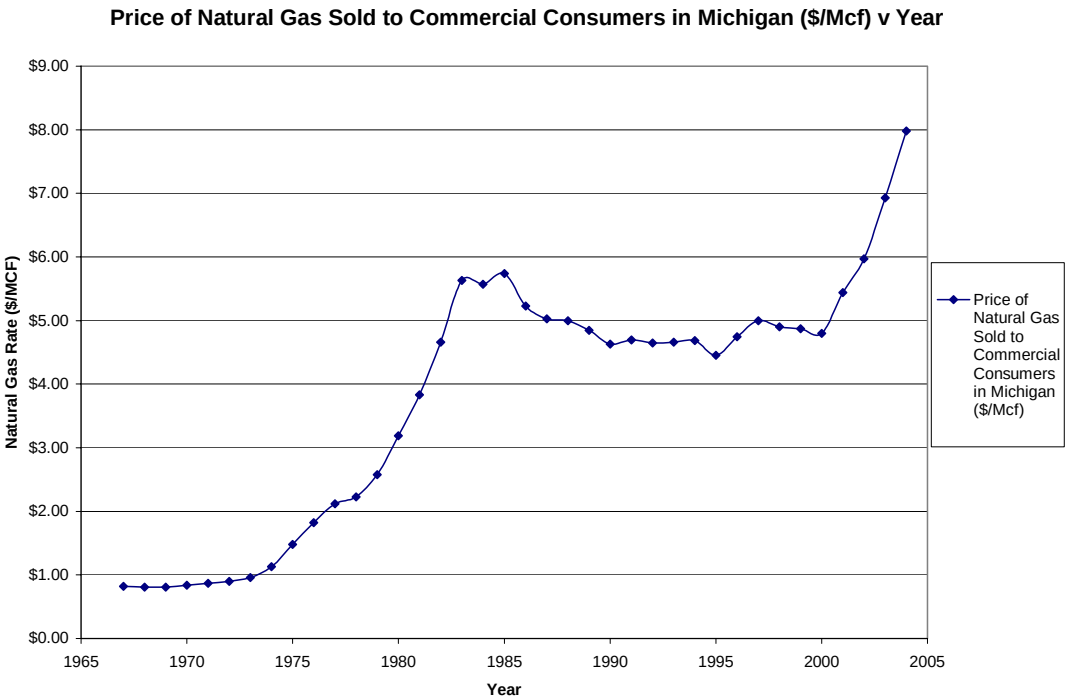
Around the year 2000, the automotive industry noticed a dramatic increase in natural gas. In just five years, the natural gas rate has doubled itself in price. In many of ***OMEGA's*** energy savings projects, the utility savings are based off the amount of natural gas that can be saved per year. In this case study, I will look at the effect of the price increase on the natural gas rate for capital projects. All prices used for this study are based on Michigan natural gas rates. Please view the provided graph to see how the natural gas rate has dramatically increased. The state of Michigan has followed the national trend and is a prime location to implement this case study. In Texas, the natural gas rate has reached a national high, $ 11.38/MMBtu.

OMEGA performed an energy savings engineering study at a local plant in 2001. The natural gas rate used for the study was $ 3.50/MMBtu. ***OMEGA*** proposed to reduce airflow in a section of the spraybooth. The plant was running an unmanned section of the spraybooth at 100 fpm. *OMEGA* engineers proposed to reduce this airflow to 40 fpm, resulting in 60 fpm of savings, which calculates to roughly $ 73,000/year of savings. These savings are valid for a 40' x 20' zone in a spraybooth for 8,644 hours/year while running production. The approximate labor and material costs or investment dollars for the airflow reduction implementation amounted to $200,000. This calculates to a 2.7 year payback, which is unacceptable under current automotive standards.

Now, plug the current Michigan gas rate of $8.50/MMBtu into this energy savings analysis with all the same settings. The Re-calculated energy savings for a spraybooth airflow reduction of 60 fpm is $177,000/year. Now, again analyzing the investment dollars to account for inflation over the four year time period, a good estimate would be approximately, $ 230,000 in investment dollars for materials, labor, and equipment. The payback for this project now calculates to a 1.3 year payback, which is acceptable under automotive standard.

This case study shows that with the rising natural gas rates, projects or initiatives that didn't meet the approved payback a few years ago may in fact be very attractive opportunities.

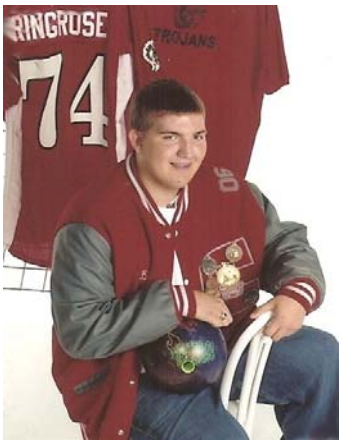
All natural gas rate referenced was obtained from the Michigan Public Service Commission and previous ***OMEGA*** projects.



Contributed By: Kevin Dunbar / Project Engineer

BRAGGING CORNER

Jeff and Julie Wallis' daughter, Stephanie, was married to Paul on July 2nd. The wedding was beautiful and the weather cooperated quite nicely. Paul and Stephanie will be residing near Jackson, MI while Paul completes his degree in art.



Billy Ringrose finished up the bowling season by receiving the boy's $1,000 scholarship from Country Lanes, which was based on bowling and academic achievements. Billy now has to shift his focus on the upcoming football season. Billy is entering his Senior year.

Bill Ringrose's grandson, Nicholas, celebrated his first birthday on August 20th.

Mich-Again

Traveling through Michigan

Roadwork and more roadwork seem to be Michigan's roads' fate most of the year. Detours, lane closings and subsequent traffic jams; who has not ranted against them? And yet, looking back at the time of stagecoach traveling, travelers fared much worse.

In 1836, a Detroit newspapers wrote that the Old Saulk Trail, leading from Detroit across the southern part of the peninsula, "is lined with so many wrecked wagons that it looked like the road followed by a defeated army flying in headlong retreat."

Stagecoach lines had been established on these roads. Dotted every twenty miles or so, inns provided food and rest for both pretty shaken travelers and tired horses.

During the rainy season, overloaded wagon wheels sunk up to their axles, the floor of the vehicle level with sticky muck. Everyone got out, lifted skirts and rolled up pants, and removed galoshes and boots that would otherwise be sucked up. Then, they trudged to the nearest woods to fell tress to pry the wagons loose. Sometimes two or three stranded parties hitched their teams together to free them one by one.

And we think that driving is difficult now? Ha.

Contributed By: Annick Hivert-Carthew

OMEGA Productive Services, Inc.
MISSION STATEMENT

TO PROVIDE PAINT SYSTEM – PROCESS IMPROVEMENT SERVICES THROUGH CONTINUAL IMPROVEMENTS OF OUR QUALITY MANAGEMENT SYSTEM, TO ENHANCE OUR CUSTOMERS' SATISFACTION OF SERVICES PROVIDED; ON TIME, ON BUDGET, EVERY TIME.

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If Once You Have Slept On An Island

If once you have slept on an island
You'll never be quite the same;
You may look as you looked the day before
And go by the same old name,

You may bustle about in street and shop;
You may sit at home and sew,
But you'll see blue water and wheeling gulls
Wherever your feet may go.

You may chat with the neighbors of this and that
And close to your fire keep,
But you'll hear ship whistle and lighthouse bell
And tides beat through your sleep.

Oh, you won't know why, and you can't say how
Such change upon you came,
But-once you have slept on an island
You'll never be quite the same!

- Rachel Field