Outline Agenda

1.00 Background

The technical issues as summarized in the Technical Memorandum produced and the advantages in the context of Building Services are as follows:

01 Since the solution only addresses the combustion process it applies to all systems utilizing hydrocarbon fuels irrespective of age or sophistication.

02 In all cases the installation can be carried out in a couple of hours without any disruption to the operation of the system or building that it serves and if necessary can be removed as simply.

03 Proof of success is unequivocal by **"before and after"** flue gas analysis results which can be directly related to thermal efficiencies.

04 Given that stable operating characteristics can be guaranteed for say one year subsequent to installation of magnets then it is possible to make initial prediction of saving from flue gas tests which can be confirmed from actual consumption values.

05 There is no downside to an aim of saving people money, extending the availability of natural resources and reducing air pollution.

06 The principles apply anywhere i.e. **it is an international solution**

07 If the solution is proven in one building it should be easy to convince clients that it will work in any of their buildings.

08 The contract and method of payment is simple and direct and not subject to outside influences.

09 The potential market is infinite and the principles involved in selling the product remain valid in any sort of commercial/financial climate.

2.00 Marketing Strategy

The solution achieves something that everyone wants so it becomes in principle irresistible if it is offered on a free trial basis and the strategy would therefore be as follows.

Offer to install the magnets free of charge and monitor results over a three month period.

This would involve:

Arranging to obtain previous consumption figures in as detailed a form as possible to determine the "best strategy" consumption values prior to magnetization and targeting reductions.

Establish accurate flue gas analysis before and after fitting the magnets.

Offering the results to the client in a report which identifies the annual savings which will be made and the payback period relative to installation/monitoring charges.

On the basis that we offer an energy consultancy service, charges could be either as a fixed cost per project or as a percentage of the first year savings.

Examples:

McGraw Hill House - earlier discussions have suggested an actual installation cost of less than £1000.00 and I have suggested a purchase cost of £2000.00 to McGraw Hill.
The annual gas costs are £20,000.00 and the savings may therefore be in the order of £4000.00.
If the arrangements were 10% of the savings then our return for the project would be £1400.00

On a one off basis such as this with a pay back period of some six months it would be simpler to increase the installation charge to say £2500.00.

On a one off basis with annual gas costs of say £l00,000.00 it maybe more attractive to the client to pay on actual results i.e. initial installation costs + £2000.00 at the end of the first year.

Wimbledon Bridge House (Standard Life) - similar situation and therefore the same return would apply although the big difference is that they may have a portfolio of say 200 similar sized properties to which the solution could be applied.

Potentially therefore our return based on a standard charge per property would be 200 x 1500 = £300,000. Standard Life would make annual savings of £800,000 with a payback period again in the order of 6 months.

3.00 Company Strategy

There are four important considerations needed to guarantee success.

01 Results of field trials that we have set up and monitored and which prove the theory in our terms.

02 A procedure which allows agreement to pre contract fuel consumption and post contract targets.

03 The necessary expertise to ensure correct installation of magnets and adjustment of fuel/air ratios during the trials and to obtain accurate flue gas analysis results.

04 Procure if possible the sole European distribution/dealership rights from Magnetizer Inc.

The skills/experience we have suggests the following:

We can all assist in satisfying 01.

I consider the arrangement setup for McGraw Hill House satisfies the requirements of 02 and is likely to be acceptable to all clients.

The advantage of post contract monitoring is that this offers ever increasing credibility to the solution and builds up valuable information for the future marketing and I see this as an area where my particular skills are appropriate.

Since Jimmy has the appropriate practical background I have assumed that the general responsibilities associated with setting up the installation phase would be
under his control which would satisfy 03.

To become sole European distributors would seem to require a credibility which could only be offered by Coolair Ltd. given that they have successfully operated such a business for fifteen years. The importance achieving this is that it allows us all to freely offer the solution without the prospect of being by passed by clients purchasing direct from the U.S. or others.

Combustion Efficiency Ltd.

T Carter Esq.
Humberside County Council
Property Services Department
County Hall
Beverley
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Dear Mr Carter

Improved combustion by magnetization

As recently discussed, I have investigated the principles involved with the above topic over the last two years and consider it can have a major impact on the issues of energy conservation and reduced air pollution.

I produced the attached Technical Memorandum from early investigations and largely for my own benefit, but it does reasonably present the principles involved and has formed the basis for subsequent studies.

I am now satisfied that the principles work in practice and have formulated sales and marketing plans which enable me to offer what I consider is a cost effective and guaranteed solution.

Utilizing established engineering standards and techniques and where possible existing records, the procedure for a given building involves the following:

1.00 Agree average annual filet consumption value and boiler efficiency.

2.00 Install the solution and monitor results over a three month period.

3.00 Prepare a detailed report to identify and agree increased boiler efficiency and to predict annual fuel/cost savings.

The above procedures would he undertaken as a field trial at no cost or obligation to the Council.

In commercial terms I would hope the Council would be persuaded by the results to purchase the solution in which case it would remain in place or if not it would be removed.

Since the solution requires no modifications to existing facilities it can be installed or removed without disruption to the normal operation of the building or heating system.

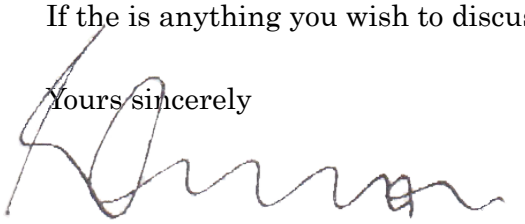
If the decision is to proceed than actual fuel consumption are monitored over a 12 month period to confirm actual annual savings made.

On the basis that we are offering a consultancy service as well as a practical solution our overall reimbursement would include 10% of the agreed cost savings made within the first year.

As discussed I would appreciate the opportunity to make a formal presentation of these proposals which would elaborate on the procedures and techniques adopted to ensure a proper understanding and full agreement at all stages and look forward to your further notification in due course.

If the is anything you wish to discuss in the interim however, please let me know.

Yours sincerely



R C Wise

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Memo

Mike

Following our recent discussion] enclose the following

1.00 Technical Memorandum No: M93/102 which describes the principles involved with magnetization and its application

2.00 Spreadsheet details of the position at McGraw Hill House i.e.

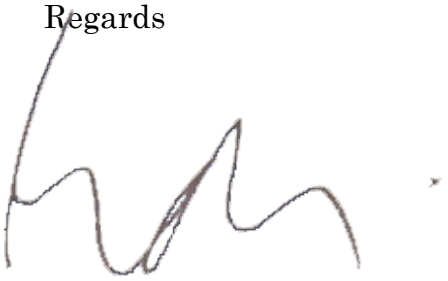
The graphs identify two years actual consumptions on a monthly basis

The projected situation (post magnetization) is established from 80% of the average value for the two years assuming a 20% saving but as discussed more years figures produces a more accurate average and better projected values - to overcome possible difficulties with seasonal efficiencies and to avoid resorting to 20 year degree day assessments.

I think this represents an acceptable approach from everyones point of view.

When you have had a chance to reflect on the principles involved and the business opportunities and marketing strategy involved give me a ring and we will meet to take it forward

Regards



TECHNICAL MEMORANDUM No: M93 / 102

Improved Combustion by magnetization

1.00 Introduction

With an increasing awareness in recent years of the need to conserve energy, many improvements have been made to increase the efficiency of plant and equipment and a variety of control techniques have been developed to promote efficient operation of heating systems, the heating facilities Within air conditioning systems and hot water supply systems.

The result is that a variety of situations occur within buildings which depend on the age of the plant and systems installed and the level of energy conserving measures which have been applied or added.

The general difficulties in upgrading systems is that control techniques may not be completely compatible with existing systems and as a result the benefits obtained may not always justify the capital expenditure, and an additional drawback may be the disruption to the systems and building necessary to achieve an upgraded solution,

Techniques which achieve the required results whilst overcoming these problems are therefore worthy of serious consideration and one such technique is the magnetization of fuel supplies to improve combustion efficiencies.

2.00 Principles of Combustion

Combustion is the chemical process in which an oxidant is reacted rapidly with a fuel to liberate stored energy as thermal energy, usually in the form of high temperature gases.

Conventional hydrocarbon fuels contain primarily hydrogen and carbon with small amounts of sulphur and inert gases and the fuel combustion rate depends upon the following.

The chemical reaction rate of combustible fuel constituents with oxygen.

The rate at which air fuel are mixed.

The temperature within the combustion chamber.

For the purposes of analysis and calculation, the principle of stoichiometric combustion is used which is the ideal state in which fuel is reacted with the exact amount of oxygen required to oxidize all carbon, hydrogen and sulphur to produce carbon dioxide, water and sulphur dioxide.

Under this condition the percentage carbon dioxide contained in the products of combustion would be the maximum attainable and therefore exhaust gases would contain no incompletely oxidized fuel constituents and no unreacted oxygen i.e. no excess air and no carbon monoxide.

Since combustion processes constitute the largest single source of air pollution, it follows that stoichiometric combustion would be of enormous benefit not only in conserving energy but in minimizing air pollution and its long term consequences.

Regrettably this is not possible because imperfect mixing and finite reaction rates.

In practice therefore, combustion equipment is operated with excess air to ensure complete *(not stoichiometric)* combustion for reasons of economy and safety and as a consequence exhaust gases contain levels of unreacted oxygen and carbon monoxide.

It follows that lower combustion efficiency results in greater levels of incomplete combustion which in turn results in a waste of energy and an increase in the level of air pollution.

The constituent parts of fuel are fixed and regular servicing should ensure an acceptable efficiency of equipment. This leaves the efficiency of air and fuel mixing which is a process largely neglected until recently and which is addressed by the technique of magnetization.

3.00 Magnetization

Although hydrogen is the simplest of all elements it possesses two distinct forms - ***ortho-hydrogen*** and ***para-hydrogen*** the principle difference of which is the opposite gravitational spins which occur within their molecular structure.

Ortho-hydrogen is the most reactive and the application of a magnetic field converts all hydrogen molecules into this form which enhances the general reactivity of the fuel and the combustion process.

In addition, hydrocarbon fuel and air are both neutral molecular structures with negative potential and when they come together in a combustion chamber in this normal state, they repel which results in incomplete combustion.

The application of an intense magnetic field converts the fuel molecules to a positive charge which increases the attraction of negatively charged air molecules and significantly improves the process of oxidation.

The result is the highest practical level of complete combustion which satisfies the dual aims of lowest energy use and minimum air pollution.

The principle of magnetization of fuel is not new but difficulties in creating sufficiently intense magnetic fields has hindered its commercial application until recently when developments which house high density ceramic magnets within steel driver plate have produced high power permanent mono-pole magnets of sufficient flux density to have the required affect on fluid passing through the magnetic field.

In terms of application, magnets are simply attached to the outside of fuel lines ad there is no disruption therefore to the system or its normal mode of operation.

The number of magnets applied and their positioning is a function of the size of fuel line and a stabilization period is involved prior to achieving magnetic saturation, which empirical tests have shown can range from five to nine weeks for hydrocarbon fuels and in this interim state it is necessary to periodically adjust fuel/air ratios.

Field trials have shown improvements to combustion efficiencies in the order of 20% which can easily be verified in given applications by comparative flue gas analysis tests.

McGraw Hill House

Monthly Gas Consumption Figures

	Year 7	Year 8	POST MAG
M	2983	2964	2379
J	2114	1194	1323
J	875	1550	970
A	1527	1481	1203
S	1893	1908	1520
O	4190	6094	4113
N	5673	6572	4898
D	6439	6702	5256
J	6971	6472	5377
F	5910	6302	4885
M	5759	6085	4727
A	3794	4603	3359
	48128	51927	40010