

# ESCO NEWS

## OCCASIONAL NEWS AND INFORMATION FROM ESCO ENGINEERING

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### FRED HASLER RETIRES

After working for Esco and its predecessor company (Ledge Engineering) for 22 years, Fred Hasler has decided to retire. Of course, if you know Fred, you will appreciate that his idea of retirement is more a matter of doing different kinds of work, rather than doing no work!

Fred will still be doing some jobs for Esco, where we need his particular skills, and where it suits his convenience. He also plans to travel, and to do various odd jobs, for himself, and others, where his ingenuity and inventiveness can find expression. Hopefully, we can continue to enjoy both the fruits of his experience in this newsletter with an occasional 'View from the field', (even if the field turns out to be a Swiss Alpine meadow), and also his cartoons.

Fred and I have worked together almost continuously since we first met in early 1966, and over the past 34 years I came to rely on his knowledge, enthusiasm, energy, wide experience and common sense as we did design work, plant studies and process start-ups together. I shall miss his advice on a day-to-day basis, although I know I can consult him at any time. We all hope he will enjoy a long and fruitful retirement.

Neil Stone

### THE LAW IS AN ASS

One frequently wonders if lawyers know what they are talking about, but it becomes painfully obvious that they don't, when it comes to technical matters. Here are a couple of classic faux-pas from the Ontario Fire Code:

Section 4.3.1.2(4) "Atmospheric storage tanks shall not be used for storage of flammable or combustible liquids at temperatures at **or above** their boiling points." *Quite a trick, if you can do it!*

Section 4.4.5.5. "Gaskets in flanged connections shall be of a material...capable of withstanding temperatures of 650°C **and above** without damage." *This pretty much rules out every material.*

*Looks as though someone got a bit too enthusiastic with 'above' in this act!*

### PUBLICATIONS

We have a number of publications that are yours for the asking, at no cost:

*'The Whys and Hows of sulfuric acid pickling'*

*'The Whys and Hows of hydrochloric acid pickling'*

*'The Whys and Hows of pickle line fume scrubbers'*

*'The Whys and Hows of waste water treatment for picklers'*

You can request your copies by phone, fax or e-mail, but we need a postal address - these are printed documents, and cannot be e-mailed.

### BUYING ENGINEERING #5

*Getting an engineering quote:*

We all have our budgets, so it is understandable that customers want to know what the engineering for a project is going to cost them. Unfortunately, this is not an easy question to answer accurately, for two reasons:

- Since engineering defines the project detail, you are in effect, asking for an estimate for an uncertain scope.
- Projects have a way of changing during the design phase, as more detailed and accurate information becomes available. These changes, which may have substantial financial benefits to the owner, in terms of reduced capital or operating costs, often require re-design or modifications to design, with consequent extra engineering costs.

Your engineering consultant has no difficulty in giving a price for a defined scope of work. This gives you a fixed cost, but also locks you into a fixed scope. The result is either lost opportunities for better design or cost savings, or an endless stream of requests for extras, neither of which is conducive to the owner/engineer co-operation which was discussed in part #4 of this series.

When you hire an engineering consultant to design your system you are placing a lot of trust in the consultant's technical skill and expertise. Why not have the same faith that the consultant will only do the necessary engineering work to complete the project in an efficient and cost-effective way?

*Next time: We can't do it on our own!*

### **NEED INFORMATION?**

If you have ever had a job done by Esco Engineering, or its predecessor companies, Ledge Engineering Inc., (1978-1988) and David Krofchak Ltd. (1973-1978), and you need information about what was done, call us. In our archives we have the job files and drawings for every job done by these three companies.

### **WHAT'S GOING ON?**

One of the things that makes our jobs at Esco interesting is the wide range of tasks we have to do. As a chemical process engineering company we must also be expert in mechanical, electrical and controls design, and have good knowledge of structural and civil design principles – not to mention being up to date on the ever-proliferating laws and regulations that seem to govern everything we do these days.

Here are some examples of the variety of jobs we have done in the past year:

- Design of vessels – evaporator tank and rectangular water tank.
- Registration of equipment and piping for pressure service in Ontario.
- Preparation of P&IDs from field surveys
- Accurate field measurement of pipe location to check for movement.
- Inspection of brickwork in pickle tanks.
- FEA stress analysis for rectangular tanks.
- Modernisation of electrical power and controls system in food plant
- Feasibility studies, layouts and cost estimates for new process evaluation.
- Heat load, mass balance and piping calculations.
- Re-design of a strip dryer to improve performance
- Evaluation, design modifications, and steam economy schemes for evaporators
- Condensate recovery system design
- Piping design for utilities, alcohol and shear-thinning food products
- Evaluation of fume scrubber performance, and recommendations for improvement.

This is just a sample – we have worked on many other problems over the years. Tell us about yours; we can probably help you.

### **SOME THOUGHTS ABOUT THE INTERNET**

Now that the Internet has become a routine part of our daily work experience it is easier to see its strengths and weaknesses. We can enjoy the super-convenience of e-mail, and suffer from the

super-inconvenience of all the junk e-mail from the get-rich-quick promoters.

The web is still quite disorganized, so we are fortunate to have some excellent search engines. My favorite is Google ([www.google.com/](http://www.google.com/)), which is amazingly fast, and often turns up exactly what I want on p. 1.

While technical product information is available from many companies with excellent Websites, general scientific and technical information is hard to find. Try looking up the solubility of calcium sulfate in water, or the flash point of alcohol. On the other hand, if you want to know everything there is to know about dachshunds ([www.thedachshundnetwork.com/](http://www.thedachshundnetwork.com/)) or Jean-Paul Sartre ([www.connect.net/ron/sartre.html](http://www.connect.net/ron/sartre.html)), there are Websites which will meet your needs.

The Web is also very good for tracking down companies, in these days when company name and ownership can change faster than the new letterhead can be printed.

One troubling trend, though, is the apparent widespread belief that, if you can't find it on the net, it doesn't exist – it is difficult to determine whether this is laziness or ignorance of the enormous amount of non-Web based information which is available. Also problematic is the accuracy of the information found – anyone can publish anything on the Web, whether it be true or false, so we need to be careful about how much reliance we place on Web-based information.

Like so much technology, the Internet is a mixed blessing, but a real benefit if we can take advantage of the good features, while avoiding the bad ones.

### **SPECIAL EXTRA FOR PICKLERS**

Our customers in the steel pickling industry will receive, with this newsletter, an article about pickling problems and solutions. This was originally prepared for a conference that was cancelled, so we are circulating it to our mailing list in the hope it will be of value and interest.

### **GOOD FOR A LAUGH**

It was mealtime during a trip on a small airline in the Northwest.

"Would you like dinner?" the flight attendant asked the man seated in coach.

"What are my choices?" he asked.

"Yes or no," she replied.