

# A Day in the Life... of a Process Engineer at Aker

Elaine O'Hara joined Aker Oil and Gas Technology UK Plc (AOGT) as a Graduate Process Engineer in 1999 and has recently been promoted to Process Engineer.

Attending school in Prestwick, Elaine enjoyed various subjects and passed Highers in Maths, English, History, Chemistry and French in S5. She decided to carry on to do Sixth Year Studies in Maths and Chemistry as well as Higher Physics.



Elaine was interested in studying chemistry further but did not want to focus upon a single subject. Weighing up possibilities Elaine was quite attracted to a career in engineering, a factor being financial reward can be greater for engineers than chemists. Friends and family made various suggestions – and Elaine spoke to a friend who had studied Chemical Engineering which sounded interesting.

Based upon her school grades Elaine earned a “Top Flight Bursary” giving a financial contribution to help with her BEng in Chemical Engineering at Strathclyde University.

During first year Elaine studied Chemistry, Maths and Basic Principles of Engineering modules. As these were general subjects, the opportunity to alter the course of study at the end of year 1 was available but this was not necessary for Elaine. In second year the subjects were more specialised – but with no focus upon any specific industry. In third year Elaine’s class had a guest lecturer from the oil and gas industry focusing upon process engineering. This helped fuel Elaine’s career aspirations!

After third year Elaine secured a summer placement with Aker through a friend working in the industry. During this time Elaine was based on-site at a dry dock in Port Glasgow working on a project on a Floating Production Storage and Offloading unit (FPSO) called Balder. Proving herself to be a constructive team member Elaine was offered sponsorship for her final year of study and a job upon graduation.

Elaine comments that undertaking work placements is an invaluable way of building up practical experience which helps greatly when looking for employment. Some universities will assist in arranging such opportunities and there is also the option to undertake a full year work placement as part of the course.

Fourth year focused on two projects: a Design Project which was a team effort to produce a design to a “client’s” specifications; and a Research Project of the students choice. Elaine enjoyed the design project as the experience was close to real work life.

Commencing work with AOGT after graduation in August 1999 Elaine was sent to Norway for a period to follow up the project she had previously worked upon. She says that it was good to follow through a job and to see that it was working as planned. In addition, it was a great experience working with different people in a different country.

Although not working on a structured training programme Elaine has completed a two-year period of graduate training on different projects as well as attending training courses. There were pay reviews every 6 months as development is so rapid you quickly become a more effective team member.

Elaine’s training has so far included a two-week oil and gas industry induction and a Management Skills for Graduate Engineers course. The best training Elaine feels is on the job, she says she is very lucky in the teams she has worked with, “they will give you a challenge but will also offer guidance and support. You learn from asking questions so, being in a good team is a great development opportunity.”



It would seem there is no such thing as a typical day for Elaine so she explains what the role of a Process Engineer is within her organisation. AOGT is a leading supplier of engineering and maintenance, modifications and operations services in the UK oil and gas industry.



When oil and gas are extracted from a reservoir they are mixed with water and sometimes sand as well – this is called reservoir fluid. It is the Process Engineers role to design equipment that will separate the reservoir fluid into oil, gas and water on the production facility. Consideration needs to be given to many factors – safety is always the top priority. Other factors include client specifications, cost constraints, environmental issues and the practicalities of the working environment.

Identifying the “design case” involves investigating the nature of the reservoir fluid, as this will affect the requirements of the equipment that will process the fluid. Over time the proportions of oil, gas and water of the reservoir fluid will change – the equipment will need to be able to handle this.

Developing 2-dimensional piping and instrumentation diagrams is the starting block of the activity. It is important that process engineers liaise with other engineers such as mechanical, piping and instrument engineers who will help develop plans into reality.

Elaine's involvement in the process varies depending upon the project she is working on – within a team she works under minimal supervision, however there are strict safety codes for the work of engineers, this means all work must be checked by another engineer before it is passed on. Operating within a team also allows for ideas to be bounced around, Elaine finds this very productive in the development of the job.

With the variety of work Elaine undertakes she is constantly learning and absorbing information. “I enjoy developing a design case as it makes you think and you realise how much you have learned from previous projects. It is a great sense of achievement to work through a problem and achieve a solution to the design.” Elaine admits there are times where routine tasks need to be completed, however, there are always new, more stimulating tasks on the horizon. In contrast, at times the job can be stressful and demanding but Elaine accepts it will not always be that way.

In terms of the future Elaine is happy at AOGT as she works on a variety of interesting projects. She aims towards earning chartered status with the Institution of Chemical Engineers (IChemE) - a professional association that accredits engineers who have proved their ability in this specialist area. This requires a minimum of 4 years experience.

Attributes Elaine thinks important for her job are:

- *The ability to communicate effectively - this means listening to others as well as speaking clearly to people in a way which will help get things done properly*
- *An interest in the subject matter is of top importance - Elaine has always enjoyed working on calculations and figuring out problems*
- *Confident and able to speak up – “this is not a job for shrinking violets”*
- *The ability to work as part of a team is essential*

Some may suggest that engineering is a male orientated profession however Elaine is quick to point out that “it should not be a male / female issue as you can either do the job or not. There is absolutely no reason why a female can not do this job.”

Elaine's advice to anyone considering a career in engineering is to speak to people who work in the field and who have studied courses you are interested in. Ask questions and do not be pressurised into areas of interest of peers or family – follow your interests. Where possible gain practical experience. **Prepare yourself for hard work but remember to find a balance between work and fun.**