

A DAY IN THE LIFE OF...

...a Process Engineer

Chris Beard graduated from Birmingham University with a B.Eng in Chemical Engineering and joined the Total Oil Refinery in Milford Haven, Pembrokeshire as a Process Engineer.

The Refinery takes in North Sea crude oil and produces low sulphur diesel, gasoline, kerosene for aviation for the UK and Irish markets. Its output averages 108,000 barrels per day. The crude is brought in by sea and the various products are transported out by coastal tanker, rail and pipeline to distribution centres for eventual delivery to garages, supermarkets and large industrial customers.

Chris is responsible for the safe and effective operation of a part of the Refinery. He is currently working on the Alkylation Production Unit which combines gaseous hydrocarbons into a liquid called Alkylate. This is an important ingredient in high octane gasoline. His daily duties involve monitoring the performance of the unit, ensuring that the product meets the specification and that the technical operating limits are being observed. His longer term goals are to optimise the use and output of the production units. For example he is working to identify opportunities for cost savings by improving the energy efficiency of the plant. This is in addition to his other projects which are concerned with engineering upgrades for the various units. One of his key responsibilities is to ensure that the various projects are properly scheduled one against the other, so that the Refinery does not lose valuable production.

Having grown up on Humberside, Chris has always been interested in the Petrochemicals industry. His work experience assignment in a chemical plant whilst at school confirmed his interest in the industry. He likes the way it combines theoretical science and practical technology. He also enjoys the challenges of problem solving caused by the continual need to bring about process improvements. He gains satisfaction from being able to see the benefits of the changes that he has made both day to day and on a longer term basis. He sees this as being the key difference between working in engineering and working in the pure sciences.

As well as having a good engineering background, other areas of skills and knowledge are vital in Chris's job. For example, good communication, team working and leadership skills are essential. Process Engineers work with a large number of different people in the Refinery, ranging from senior management to the process operators. Each of them rely on people like Chris to be systematic in the way they approach and analyse problems, the way they handle mathematical data and the way they plan and coordinate complex projects.

Over the past 18 months Chris has not only worked in the Refinery, but he also has travelled to meetings and courses in both France and Germany. Total operates a structured development programme for Graduate Engineers involving rotation between different operational sites and offices around the world. Chris is keen to seize upon the opportunities to work elsewhere in the world and to progress up the career ladder.

However he sees his next immediate steps as gaining a rounded engineering background, including working on the different production units, working on engineering design and production planning. Chris is a keen sportsman and has always played football, but since moving to Pembrokeshire he taken up watersports particularly surfing.

