

# WHY ENGINEERING?

An engineers bio | Plastics Packaging | Unity

## Packet of crisps anyone ?

One of the many blessings of living in the developed world is waste management. The fact that we have an orderly approach to processing consumer waste, with big smelly diesel powered council trucks, collecting masses of junk from the neighbourhood and shipping it off into the horizon; never ceases to amaze me.

It's easy to think our waste is being processed accordingly, we have recycling facilities, the mighty blue bins. Surely everything I throw in that blue bin is reintroduced into the economy? Maybe not so.

"Each year, at least 8 million tonnes of plastics leak into the ocean – which is equivalent to dumping the contents of one garbage truck into the ocean every minute. If no action is taken, this is expected to increase to two per minute by 2030 and four per minute by 2050" - Rethinking Plastics, Ellen-McArthur Foundation.

This is just one of many alarming facts from the highly detailed report 'Rethinking Plastics: The New Plastics Economy' by the brilliant Ellen- McArthur Foundation.

## Where Engineering can take you

### *Summarise your career*

I studied Mechanical Engineering at the University of Leeds (UK) graduating in 1983. This was a time of great recession and I failed to secure a graduate position. I then needed to think laterally and found a position as a Research Assistant on a BP funded project at Durham University. I had the opportunity to use this work towards a PhD but research was not in my blood. Instead I focused on getting as many skills as I could and after two years at Durham I joined the BP subsidiary company for whom I was doing the research. This led me to the world of heat transfer and combustion in oil & gas where I have stayed ever since.

After eight years with two EPC companies I joined UOP, a process licensor, twenty years ago as a fired heater specialist. Here I get involved in designing heaters, working with process engineers in deciding optimum heat integration schemes, troubleshooting on site and delivering training courses. My work has taken me to four continents and 65 countries.

### *How do you continue your education?*

Some twenty years after completing my degree I decided to study part time for a Masters in Energy. Partly this was because I had to sit at a table anyway to supervise my children to complete their homework. And partly this was because the Fellowship of Engineering decided to provide half the funding. I actually enjoyed studying for my MSc more than my first degree because it was purely for fun – if I failed nobody need know. Maybe because of this lack of pressure I ended up getting a Distinction, a marked difference from my very ordinary grade for my first degree. Having completed my Masters I decided to sign up for an MBA also by distance learning but this seems to be taking me a lot longer. As a technical specialist again I am doing this purely for curiosity.

It highlights the urgent need for changing our approach to waste. Living minimal, not eating crisps that often, perhaps living off the grid may help matters slightly, but a systemic change top down is required.

"Current plastic packaging offers great functional benefits, but it has an inherent design failure: its intended useful life is typically less than one year; however, the material persists for centuries, which is particularly damaging if it leaks outside collection systems, as happens today with 32% of plastic packaging."

The solution requires input from everyone, legislators, economists, scientists, engineers and end-consumers.

"Increase the economic attractiveness of keeping materials in the system - how can you target given sectors to ensure plastic doesn't escape the system and add value"

Think about this one, how can plastic packaging be reintroduced into the economy effectively, efficiently and cleanly? Quite a challenge you may find. But it's a challenge that needs to be given thought sooner than later.

And remember, working towards such causes is an act of worship.

*Abu Zarr Al-Ghafari (may Allah be pleased with him) reported that the Prophet (peace and blessings be upon him) said, "Removing harmful things from the road is an act of charity (sadaqah)." (Authenticated by Al-Albani)*

### *What do you think of MEN (Muslim Engineers Network)?*

A number of ex colleagues from previous companies used to meet, usually at a bbq in a park, to keep in touch and to network. We knew non Muslim colleagues met regularly at a pub to network and we felt we should do the same, though not in a pub! We made these park gatherings open so anyone was welcome. Then after a few years we heard about MEN and we decided to join them - this was a group with the same aims as ourselves but more formally organised.

Having been welcomed by MEN and become a part of it I feel that MEN should be much more than just networking. We have had the blessing of Allah and the effort of our parents and those around us to get to where we are. Now we have to give back as well. As Muslims, particularly in the UK, we are still part of an underachieving group. In this respect I say "Shame on us". We need shoulder responsibility and to mentor and encourage our youth to become good Muslims, exemplary members of society and an aim of achieving excellence in their education and career, for the sake of Allah (swt).

### *What advice can you give to other engineers including young engineers?*

First of all fear Allah and strive for excellence in your deen. As a part of this be the Muslim role model at your workplace, university or school. Know that for our non Muslim colleagues we are the face of Islam. Be kind, sincere and helpful even to our non Muslim colleagues.

Don't ever be arrogant or complacent that the world owes you a living, even if you have achieved the most excellent of grades. Any job will require hard work, dedication and enthusiasm. Be disciplined in your time keeping and develop a reputation of being dependable.

Aim for excellence in your work. An elder once commented "If you are discriminated against then do work to such quality that it's obvious you are being held back only due to discrimination".

When I was young, an elder non Muslim colleague gave advice to a group of us young engineers "You will only get so many opportunities in life, it's up to you to grab them!".

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## Muslim Brotherhood & Unity

Alhamdulillah, the Muslim Engineers Network, has muslims from all over the world. In fact, there are MEN members in every continent of the world. It shows no matter, where we are from and what our background is, we can all be united.

Unity in Islam is a Quranic order:

*And hold fast, all of you together to the Rope of Allah (ie this Quran), and be not divided among yourselves. (Sura Al-Imran verse 103)*

There are many hadith relating to unity and muslim brotherhood also. One hadith Qudsi states 'Allah shall ask on the Day of Judgment; 'Where are those who loved for the sake of my greatness? Today when there is no shade, I shall have them in my shade.' [Sahih Muslim]

We have all heard about the situation of the Day of Judgement, when the sun will be very close to the the people. Living in a hot country like Saudi Arabia makes us understand the importance of having a shade. If we loved and united with our fellow muslims (even if we may have differences), then inshAllah we shall be under the shade of Allah on the Day of Judgement.

In another hadith: Umar ibn al-Khattab reports that the Prophet said:

*"Indeed among the servants of Allah are people who are neither prophets nor martyrs themselves but whose place both prophets and martyrs will envy on that Day, "Those who were with him asked: 'O Messenger of Allah, tell us who they are." he said, "They are those who loved each other for the sake of Allah though there was no bond of kinship (ie not related to each other) between them and no thought of gain. By Allah, their faces shine with light. They are bathed in light. When men take fright they fear not. When men are struck with sadness they feel no sorrow "*

*Then he read the verse: Most surely the friends of Allah are (those) who have no fear and do not grieve. (10:62)*

