PROFESSIONAL INTERVIEW ESSAY:

Of all the engineering disciplines, chemical engineering apparently covers the most relevant technology needed in the petrochemical industry, but yet the chemical engineer is not enjoying an edge over others. What are your views?

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Engineering is a profession by which we apply science to develop an equipment or design a process that improves the quality of lifes of society, for example, building bridges to improve traveling time, building water treatment plants to provide clean water, power plants to provide electricity, etc. All these technological feats are the work of engineers.

There are several branches of engineering or engineering disciplines. Traditionally, the most popular engineering discipline is mechanical engineering. This is followed closely by civil and electrical engineering. The reason these disciplines are widely known is that the product or area the discipline is involved in, the general public can interact with or see. For example buildings, roads, air-conditioning and lighting are all things which lay-men can relate to so they are able to associate these to the civil, mechanical and electric engineers. Generally members of society are end users and do not appreciate things they cannot relate to or see. Due to this human trait, the other lesser known engineering disciplines such as chemical engineering, material engineering, instrument engineering will never share the limelight of the mechanical, civil and electrical.

Chemical engineering is in actual fact one of the most important engineering disciplines as it is often the start of design processes. Chemical engineers design a process to develop a raw material into an end product which is used by society. Only from this design can the other engineering disciplines begin their design on the individual components such as the mechanical equipment, electrical wiring or structures.

In the offshore oil and gas industry, a team of process engineers are required to evaluate from both a technical and economical view if the project is viable. If viable, a conceptual design is drawn out by which key equipment are identified. From this point, the project then goes into "basic" engineering where the other disciplines (mechanical, civil, instrument and electrical) start their design. In the first three phases (pre-conceptual, conceptual and basic) chemical engineers play a very important role as only once the process is finalised can the other disciplines start work. The process/chemical engineer is also responsible for the design of the equipment sizes. If the equipment is inadequately sized, then it is the fault of the chemical engineer and not the mechanical engineer.

Chemical engineers have always been seen as the "jack of the trades". In that, a chemical engineer has to have a good grasp of mechanical and instrument engineering as well. The chemical engineering disciplines has always kept a low profile. This can be seen in the amount of chemical engineering students in the universities. However, recently there has been a growth in graduate chemical engineers as the chemical engineering profile increases. Some of the main drivers to increasing the profile of chemical engineers is the increased awareness in the environment and safety aspects. Chemical engineers play an important role in pollution control and safety design. As society becomes more safety and environment conscious, any pollution and chemicals fires become a public issue.

In developed countries such as the US and UK, chemical engineers are widely recognised. These are developed countries where technological advances are given a high public profile. Chemical engineers tend only to be recognised in very specific industries and only in the design phase. Chemical engineer who work as plant managers, however do enjoy the benefits at a management capacity.

In my opinion, the chemical engineer in Malaysia is unlikely to enjoy the profile of the other engineering disciplines. However, a chemical engineer should strive for recognition between peers. As a practicing chemical engineer, I work towards obtaining recognition in the designs and personal satisfaction when the design is successful. Being a chemical engineer is a rewarding experience in that one will be exposed to the latest technology, not just in the chemical engineering field but in other fields.

In conclusion, we as chemical engineers should strive for the satisfaction that we are helping to improve the quality of life for society. ■