

Muscling in on the boys' club

More women are making their mark in the traditionally male-domain of engineering

-Nicky Willemse

Engineering is still a traditionally male-dominated domain, but women making their mark in this field say anyone can do it, provided they have a passion for their profession and work hard.

“Our tools are computers, not mallets and don’t let anyone make you believe otherwise”, said Ashley Kleinhans, a “think blue” engineer at Volkswagen in Uitenhage.

Kleinhans, who is completing her doctorate in neuromorphic engineering in the mechatronics department at Nelson Mandela Metropolitan University in Port Elizabeth, works on projects that will “increase efficiency and decrease our effect on the environment”.

She is one of the 10% of female engineers in South Africa – and believes that men and women should learn to work together. “Men and women are not in competition. If they can figure that out and start working as a team, there is so very much they can accomplish”, she said.

Alison Rademan, industrial engineering manager at Continental Tyre in Port Elizabeth, has been the only woman yet to attend the company’s daily multidivisional meeting known as the “boys club”.

“It was a lot more difficult when I first started at Conti. They thought I would be a pushover and my nick name was ‘sweat pea’. They soon realised this was not the case. Meetings used to commence with ‘Good morning gents.....’ The only consideration I am given is that if they swear they apologise to me.”

Despite its name, industrial engineering is not confined to an industry. Most engineering disciplines apply skills to very specific areas. However, industrial engineering, which aims to improve productivity and quality while saving companies money, can be applied to a variety of businesses and involve anything from shortening a roller coaster to streamlining a hospital operating room, distributing products worldwide or manufacturing superior cars.

“Industrial Engineers figure out how to do things better,” said Dr Ann Lourens, head of industrial engineering at Nelson Mandela Metropolitan University and project manager of the Women in Engineering Leadership Association.

“They engineer processes and systems that improve quality and productivity and work to eliminate any waste of time, money, materials, energy and other resources. This is why many industrial engineers end up being promoted into management positions.”

Rademan started her career as Continental Tyre’s safety engineer in 1994, was promoted to risk manager in 1997 and took over the combined function of industrial engineering and risk a few years ago.

Her work involves numerous meetings with the company’s various “mission-directed work teams” from divisions and departments to find solutions to problems that could be affecting efficiency, quality, cost and morale.

“In my job you require common sense, an ability to make decisions – most of which are not very popular – determination and very broad shoulders”

Spar Eastern Cape project controller Ntombi Ntuli is combining her industrial engineering skills with project management to improve working standards in the company’s distribution warehouse. Every day she prints out workforce productivity reports from the previous day and uses these to “ascertain trends in overall performance and try to find ways of improving working conditions, which in turn lead to improvement in performance”.

“Physical strength doesn’t count for much anymore, but using your intellectual ability and analytical skills counts for everything.”

Zukiswa Dikana, a parts quality engineer at Mercedes-Benz in East London, said women were “gaining ground” in engineering environments.

“Women have to work extra hard to prove that they are able. We not only have to prove that we know what we are doing, but that we can do it as well as our male counterparts. And because of

our effort and enthusiasm, we are open to more learning (possibilities) and great opportunities,” she said.

Dikana’s work include analytical investigations into the vehicle body and interior trim, managing the induction of new parts for new models, resolving plant problems and warranty concerns, performing audits and planning projects. ‘The main part of the job is to ensure that production runs effectively with zero or minimal problems.’”

She said it was important for women to “remain proud and not just blend in to feel accepted. I do not compromise my intellect by making someone else feel manly.”

Susan Piron, a quality control manager at pharmaceutical company Fresenius Kabi Manufacturing in Port Elizabeth, said women interested in pursuing engineering should not allow the predominantly male-dominated working environment they will be entering to put them off. “Do what you enjoy and what you are passionate about first. If you happen to go into an environment where males dominate, be yourself, be committed and prove that you are equal, if not better in what you do.”

In addition to the qualifications required for her job, Piron said: “You also need a passion for quality in all spheres from ensuring compliance to specifications using statistical methodologies to the human aspect of teamwork, encouraging learning and continuous improvement.”

Sarisha Hurrisker, a junior civil engineering technician at Aurecon in Port Elizabeth, said her role involve assisting her project leaders in the design of civil engineering services, producing drawings, measuring quantities for cost estimates on different projects and the administrative duties that accompany the design tasks.

“I am largely responsible for creating the environment I work in. My approach is that I am here to learn and gain experience from my colleagues. We should not want to prove which gender is superior but understand that both rely on each other’s strengths to be successful.”

Lourens said: “Women are making a significant contribution towards engineering in South Africa, largely due to their perseverance, drive and will to succeed. Along with being just as

qualified for the job as their male colleagues, they also bring with them a range of skills unique to women, which adds to their success.

“Their inherent female intuition allows them to offer new perspectives that are out of the box and their ability to multitask enables them to competently manage several projects at the same time.”

“Women don’t have to prove themselves; their work will be confident and tenacious and persevere.”

Nicky Williams is a freelance writer contracted to Nelson Mandela Metropolitan University in Port Elizabeth. This article was in the Mail & Guardian (19-25 October 2012)