



NISSI
ENGINEERING



ENGINEERING **COURSE**



COURSE OVERVIEW

The ever increasing price of mineral resources and electricity has caused the manufacturing costs to be extremely high which reduces profit margins of businesses. Further to this problem the migration of skilled resources from South Africa to other developing and first world countries has over exaggerated the ever existing scarcity of technical skill set in our country, beside the fact that Engineering is and has always been an scarce skill. With Scarcity of experienced engineers in the country, manufacturing technically inclined engineers are even worse of a scarce skill and this is because transfer of technical skills in a manufacturing space or at plant level has deteriorated with migration of skilled engineers out of the country.

The purpose of this course is to bridge that prevalent gap for engineering managers, graduate engineer, maintenance manager, project engineer, artisans, technicians and engineers in general. This structured engineering course will enable an engineer or technical person to get into any manufacturing space and apply their technical skills in a manner that will directly impact the manufacturing cost positively through cost savings, cost avoidance or cost reductive manner especially on utilities and maintenance. This course will enable an engineer or technicians to understand cost implications of plant utilities, plant machinery and equipment better, whilst pointing an engineer or technician in a direction that will result to CAPEX and or OPEX projects. This will exercise technical abilities of an engineer or technician as well as their process understanding leading them to continuous improvement through OPEX and CAPEX projects





DIRECTORS PROFILES



Mondli Zondi holds a Mechanical Engineer's Certificate of Competency (GCC Factories), has experience as a GMR 2.1 appointee and is registered with ECSA as a Professional Certificated Engineer. He has vast experience in the Manufacturing, Automotive, Fast Moving Consumer Goods (FMCG) and Pharmaceutical industries. He has fulfilled various roles in the manufacturing industry from his humble beginnings as a Millwright Artisan up to GMR 2.1. Engineering Manager level.

Nomvula Zondi is a Process Engineer with BSc degree in Chemical engineering and MSc Interdisciplinary Global Change Studies (Environmental Science). Nomvula has years of experience in the Petrochemical Industry. Her experience includes operations technical support, capital projects – conceptual and feasibility engineering, basic engineering design and commissioning.



Nissi Engineering Solutions is 100% black owned company.



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www.nissiholding.co.za



NISSI ENGINEERING COURSE OBJECTIVES

COURSE OBJECTIVES

Upon successful completion of this course, the delegates will be able to:

- An engineer or technician will quickly learn the plant installation, plant equipment , plant utilities and make an accurate connection to utility bills and manufacturing cost
- An engineer or technician will know exactly where to start applying his or her technical expertise on utilities and maintenance without any waste of time,
- An engineer or technician will quickly understand the expenditure patterns of his or her plant and start making or initiate necessary cost reductive changes or projects
- An engineer or technician will know how identify, quantify and implement cost saving initiatives in any manufacturing environment
- An engineer or Technician will understand Rand value of energy content for different fuels like oil, gas and coal
- An engineer or technician will be able to analyse electrical, refrigeration, heat or thermal losses and influence the necessary continuous improvements through OPEX or CAPEX projects
- An engineer or Technician will be able to influence the procurement commercial agreement using plant data for fuel usage
- An engineer or Technician will be able to analyse, understand and influence thermal system of the plant
- An engineer or technician will be able to understand different types of carbon steel, alloys and their plant application to reduce downtime and increase availability.

WHO SHOULD ATTEND

- Engineering Managers
- Projects Engineers
- Engineering graduate mechanical, electrical and industrial
- Maintenance manager
- Utilities or services Engineer, foremen or manager
- Utility engineer or artisan.





NISSI ENGINEERING TRAINING CONTENT

DAY 1

OVERVIEW OF MANUFACTURING PLANT

- Understand the manufacturing cost from technical point of view
- Capacity at which an engineering resource is hired
- Category of utility components building up manufacturing costs

APPLICATION OF TECHNICAL EXPERTIES & ENGINEERING PRINCIPLES

- Reading and understanding of plant electrical reticulation
- Analysing electrical bill and connect consumption back into the plant equipment
- Identifying equipment using high energy, plant losses, cost saving opportunities
- Quantification of cost savings and establishing CAPEX or OPEX projects
- CAPEX or OPEX project's ROI, implementation and maintenance
- Reading and understanding of plant thermal system
- Reading and understanding of coal supply commercial agreement
- Reading and analysing of coal specification, grading and rating
- Analyse use of coal energy, losses and identify cost savings or cost avoidance opportunities
- Reading and analysing of gas fuel supply commercial agreement
- Usage of gas fuel in the plant thermal system
- Identify heat losses, quantify heat losses and establish and implement cost saving initiatives

DAY 2

- Analyse maintenance expenditure patterns, to identify and action area of focus
- More scenarios of utility cost savings, cost avoidance or cost reduction initiatives
- More scenarios of gas fuel, coal and industrial oil usage, losses and heat recovery methods to reduce consumption
- More discussion of different energy content for fuel supply, i.e. coal, gas, industrial fuel
- Understanding of different types of material of construction and
- Understand Mechanical properties of steels, and steel alloys and their use
- How to choose different steels for specific applications informed by their mechanical
- properties to avoid costly failures and reduce plant downtime



Engineering and utility cost reduction course for Plant Engineers and Technicians

Company name			
Company vat number		Postal code	
Company Tell no.			
e-mail address		Fax number	
Purchase number (PO)		Reference for Candidate	

Candidates Registration

	Name and surname	Designation	Cell	e-mail address
1.				
2.				
3.				
4.				
5.				

Payment must be received within 5 working days from receipt of invoice by electronic transfer to and send Proof of payment or PO to: mondli@nissiholding.co.za

Account Details: Nissi Engineering Solutions Pty Ltd	Account number @ standard Bank	10 11 626 870 9
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I
acknowledge that I have read, understood and accept the programme and Terms and Conditions (including Payment Terms) and hereby apply for registration on behalf of myself (if a single delegate) or on behalf of the under mentioned organisation which I am duly authorised to represent.

Name and surname:

Tel:

Signature:

NB: (Where organization sends delegate/s and is responsible for payment) This contract is not valid without a signature

Registration Fee:

R 7,500.00 per person for in person classroom session

Date.....

Authorization:

The signatory must be authorised to sign on behalf of the company. I acknowledge that I have read and understood all of the Payment Terms and Conditions.

Policies and Term conditions

Delegate Cancellations:

By completing this registration form, the client hereby agrees that Nissi Engineering Solutions (Pty) Ltd will not be able to mitigate its losses for any less than 50% of the total contract value Cancellations must be received in writing three weeks prior to the event. Only cancellation made in writing and addressed for the attention of the Finance Director will be recognized by Nissi Engineering Solutions (Pty) Ltd. Cash alternatives will not be offered although delegate substitutes are welcome. The full workshop fee is payable.

If for any reason Nissi Engineering Solutions (Pty) Ltd decide to amend this Workshop, Nissi Engineering Solutions (Pty) Ltd reserves the right to transfer this booking to another workshop to be held in the following six months, or to provide a credit of an equivalent amount to another workshop in the same sector within the following six months

INDEMNITY

should for any reason outside the control of Nissi Engineering Solutions Pty Ltd the venue or speakers change, or the event be cancelled due to act of any terrorism, extreme weather conditions, industrial action, Nissi Engineering Solutions (Pty) Ltd shall Endeavour to re schedule but the client hereby indemnifies and holds Nissi Engineering Solutions (Pty) Ltd harmless from any costs, and expenses including attorney fees, which are incurred by the client





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