

UNIDO Steam System Optimisation Fundamentals Training Course

1-Day Training Course

**R3,999 excl. VAT
per delegate**

Next Course

Date:

Venue: Emperors
Palace Conference
Facilities

**Accredited
for:**

**1 CPD
Point**

Overview

Steam systems often constitute a large portion of an industrial site's utility bill but on many sites, little attention is paid to how efficiently these systems are run. There are various optimisation opportunities which exist within a steam system that can lead to large financial savings. Some of these options do not even require significant investments to be made.

Offered under the auspices of the National Cleaner Production Centre of South Africa (NCPC-SA), this training aims to provide delegates with a fundamental understanding of steam systems and their components, as well as the thermodynamic principles that govern their operation. Using these principles and a "systems" approach, optimisation opportunities within the system can then be identified and quantified. The training outlines how an assessment of a steam system is conducted and also introduces tools from the US DoE such as the Steam System Scoping Tool (SSST) and Steam System Modeller, which can be used to assist with steam system analysis.

Who Should Attend & Why?

This solution is aimed at all engineering and technical personnel who wish to gain a better understanding of steam systems and the optimisation opportunities which exist within them.

The course fee covers:

- UNIDO accredited full-colour training manual
- All refreshments

Discounts are available for group bookings and early bird bookings. This course is also available for presentation on site for groups of 5 or more.

Call us on (011) 027 8243 or e-mail
training@vwgconsulting.co.za for info on
latest course dates & specials

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Your Facilitator



Craig van Wyk (B.Sc. (Eng.), MBA) is a Chemical Engineer and the founder of VWG Consulting. He has over 20 years of industrial experience in a wide range of industries and significant steam system optimisation experience encompassing industries such as food and beverage, iron and steel, home and personal care, chemicals, textiles and others.

He is an accredited UNIDO National Steam Systems Expert and National Training Facilitator. Craig began his career as a Technical Trainee at the South African Breweries Ltd, after which he worked as a Process Engineer at SAB's Central Office in Sandton. After consulting to SAB's 7 breweries as part of this role, he joined Tiger Brands as a Process Engineer. In a short time Craig was appointed to the role of Production Manager, responsible for throughput, product quality, safety, plant reliability, cost management and morale. He returned to SAB Ltd as a Brewing Unit Manager, and 4 years later took up the position of Brewing Manager at Chamdor, a position he held for a further 3 ½ years. In 2005 Craig founded VWG Consulting, focusing on productivity and resource efficiency (energy, water, materials and waste) in the manufacturing sector. He has since gone on to complete projects on over 100 industrial sites across SA, many of which involved steam systems.

Topics Covered

Module 1: Steam System Fundamentals

Module 2: Steam Generation

Module 3: Steam Distribution

Module 4: Steam End-Use & Cogeneration

Module 5: Condensate Recovery

Module 6: Summary and Conclusions

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Module 1: Steam System Fundamentals

- Overview of energy in South Africa
- The systems approach
- Steam system fundamentals:
 - Steam system components
 - Thermodynamics of steam
 - Conservation of mass
 - Conservation of energy
 - Fuels
 - Steam system optimisation opportunities

Module 2: Steam Generation

- Steam generation costs
- Steam generation efficiency
- Shell losses (radiation and convection)
- Blowdown loss
- Stack loss
- Best practices in generation

Module 3: Steam Distribution

- Losses in distribution
 - Steam leaks
 - Heat transfer losses – insulation
- Best practices in distribution

Module 4: Steam End-Use & Cogeneration

- Steam end-use
 - Steam demands
 - Heat exchangers
 - Thermocompressors
 - Absorption chillers
- Steam turbines
- Best practices in end-use and cogeneration

Module 5: Condensate Recovery

- Steam traps
 - Types of steam traps
 - Steam trap management programme
- Condensate recovery
 - Introduction
 - Evaluation of condensate recovery systems
- Best practices in condensate recovery

Module 6: Conclusions

- Steam system energy assessments
- Key points/take-aways
- Tools & resources for steam system evaluations



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REGISTRATION FORM

COURSE DATE: _____

VENUE: _____

DETAILS OF AUTHORISING PERSON/PERSON RESPONSIBLE FOR ACCOUNT

Full Name: _____

Company: _____

Designation: _____

Company Address: _____

E-mail Address: _____

Telephone Number: _____

Cellphone: _____

VAT Number: _____

Authorising Signature: _____

By completing and signing this form the authorising signatory accepts the terms & conditions listed at the bottom of the form

DELEGATE INFORMATION

Please ensure this information is correct as this is what will appear on name badges & course certificates

1. Full Name: _____

E-mail Address: _____

Cellphone: _____

Position: _____

Dietary Req. _____

2. Full Name: _____

E-mail Address: _____

Cellphone: _____

Position: _____

Dietary Req. _____

3. Full Name: _____

E-mail Address: _____

Cellphone: _____

Position: _____

Dietary Req. _____

All registration forms can be forwarded to **training@vwgconsulting.co.za**. Upon receipt of the registration form, VWG Consulting will issue an invoice with payment instructions. Payment of the full course fee needs to be made upon booking to secure your place.

TERMS & CONDITIONS

DELEGATE CANCELLATION POLICY:

All delegate cancellations must be received in writing and are subject to the following conditions:

- 14 days prior to course - full refund
- 13 to 7 days prior to the course – credit voucher for full amount which can be redeemed against future training courses
- Within 6 days of course – no refund or voucher will be issued
- No shows will be treated as a cancellation and no refund or voucher will be issued.

VWG CANCELLATION POLICY:

In the event that VWG Consulting cancels an event, delegate payments at the date of cancellation will be credited to a future event. If VWG Consulting postpones an event, delegate payments at the postponement date will be credited towards the rescheduled date. If the delegate is unable to attend the rescheduled event, the delegate will receive a credit voucher to redeem against a future event. VWG Consulting shall assume no liability whatsoever in the event this conference is cancelled, rescheduled or postponed due to a fortuitous event. For purposes of this clause, a fortuitous event shall include, but not be limited to fire, labour strike, extreme weather or other emergency.