



# CASO

COMPRESSED AIR SYSTEMS OPTIMISATION

## Compressed Air Systems Optimisation (CASO) End User

*The Compressed Air Systems Optimisation (CASO) End User training is a two-day course that provides candidates with sufficient comprehension and technical capacity to optimise a compressed air system within their organisation, as well as the fundamentals required to undergo further detailed UNIDO/NCPC-SA expert level training and coaching.*

CASO training exposes candidates to all common components of a compressed air system, and how to perform an associated assessment. Basic exercises, case studies, and practical examples are discussed in the class. The syllabus is for end-users, and is a pre-requirement for organisations and persons who wish to undergo in-depth training in compressed air systems.

The CASO end user training is a pre-cursor to the expert level training that is delivered at an organisation's facility where candidates are equipped with the knowledge, skills and tools needed to support the adoption and implementation of CASO in industry. Trainers provide onsite technical training, assistance, and coaching of facility personnel on CASO project development and implementation over

a period of 5-6 days. This is followed by assignments to be completed and practical work done over a period of 6 months. After successful assessment of assignments candidates may sit for the Expert Level Certificate Exam.

## END USER TRAINING PROGRAMME OUTLINE

### Section 1: Supply side

This includes the definitions of compressed air (CA), air properties, CA efficiency and costs, compressors and their applications, rotary screw compressors, dynamic centrifugal compressors, rotary vane compressors and heat recovery.

### Section 2: Treatment & Distribution

Condensate treatment, drying, storage, filtration, piping and installation conditions.

### Section 3: System assessment

System analysis, pressure profiles, demand profiles, baselining energy consumption, case studies and exercises section.

### Section 4: Demand side

Leakages, artificial demand, inappropriate uses, maintenance, and a power equation example.

## COURSE OUTCOMES

On completion of the CASO two day course candidates will be able to:

- Initiate the development and implementation of CASO measures
- Apply knowledge to new and existing systems
- Identify potential optimisation opportunities
- Determine how to achieve cost savings and energy efficiency through the appropriate application of CASO
- Assessing CASO opportunities

## DELEGATE PROFILE

Production & process engineers, consultants, compressor salesmen, maintenance and services technicians, pneumatic

operators, compressor control & automation specialists.

Energy engineers, CEMs, CEAs, CMVPs who require more in-depth training on CASO and need to earn renewal credits.

## BASIC SKILLS REQUIRED

The CASO training is at a level where candidates need to have an understanding of basic engineering concepts, or underwent a minimum of Fundamentals to Energy Management Training (FEMT).

## RECOGNITION

### Engineering Council of South Africa (ECSA)

2 Continuing Professional Development (CPD) credits for ECSA registration.

### Association of Energy Engineers (AEE)

1.6 credits for Continuing Professional Competency (CPC) demonstration to re-certify on another AEE certification program.

### Attendance certificate

Attendance certificate will be issued to all delegates that attend the full duration of the training course. (85% or higher attendance required.)

## COSTS\*

### Course only fee:

**R5 700.00 (excl VAT)**

**Course fee includes:** 2 day training course, attendance certificate, training manual, lunch, teas and coffees.

## BOOKINGS

Book online at [www.energytrainingfoundation.co.za](http://www.energytrainingfoundation.co.za) for your training and examination. You will receive confirmation from the Training Administrator with all the necessary arrangements and information.

#### \* Terms and conditions

1. First paid first served policy applies for booking security
2. Booking security requires the following to be received six (6) working days prior to the commencement of the course:
  - a. Full payment cleared in bank with proof of payment supplied.
  - b. A deposit of 25% with proof of payment supplied.
  - c. A purchase order for the full amount of the invoice.
3. Fees include coffee/tea/juice on arrival, mid-morning coffee/tea with pastries, mid-afternoon coffee/tea with biscuits, and lunch. For training the fee includes the black and white text books, course fee and one year membership of the SAEEC. For examinations the fee includes the examination fee, marking fee, certification application fee, and 1 year membership of AEE for first certifications.
4. It is the responsibility of the candidate attending the course to arrange their own travel, accommodation, breakfast and dinner.
5. Policy on international candidates
  - a. Invoices exclude withholding and country-specific taxes. Should these be leveraged by your country government, we reserve the right to invoice the responsible entity/person to recoup the costs.
  - b. VAT is payable for candidates attending training in South African borders, this may be claimed on departure from South Africa using the tax invoice.
6. Policy on cancellations
  - a. Cancellations received within five (5) working days prior to the first day of training will carry a 25% cancellation fee. No course material will be supplied. For examinations a rescheduling fee of R650.00 will be leveraged.
  - b. Cancellations received six (6) working days prior to the first day of training will receive a full refund.
7. Policy on accounts not in good standing
  - a. The candidate in attendance at the course ultimately remains responsible for payment of the outstanding account and providing the proof of payment thereof.
  - b. In the event that a candidate, or the candidate's organisation is not in good standing with us we reserve the right to withhold:
    - Certificates of Attendance
8. The Energy Training Foundation (EnTF) is a division of Energy Cybernetics (Pty) Ltd, an EOH company, and the invoice will be made out by Energy Cybernetics.
9. Proforma invoices will be supplied, Tax Invoices will be raised on request but these are payable within 30 days of issue.
10. Right of Admission Reserved.

### About the Energy Training Foundation

The EnTF offers tailor-made training courses to fulfil the energy training needs of the industrial, commercial, mining, government, utility, building sector of Africa. EnTF is the sole approved training partner of the AEE for the Southern African region and Indian Ocean Islands, the training partner of the SAEEC and the AEPEA, is an EWSETA accredited training provider, with course accreditation for CPD registration requirements with ECSA.

Programs offered by EnTF include customised training programs, mentorship and stipend management programs, locally developed training and internationally accredited certification programs. The most popular: Certified Energy Manager (CEM), Certified Energy Auditor (CEA), Certified Measurement and Verification Professional (CMVP), Certified Water Efficiency Professional (CWEP), Certified Renewable Energy Professional (REP), Certified Business Energy Professional (BEP), Certified Carbon Reduction Manager (CRM), Fundamentals of Energy Management (FEMT), Basic Principles of Energy (BPO), Measurement and Verification Standard Training (MVST), Nelson Mandela University PV Technologies short learning program (PVTECH).

Energy Training Foundation is a division of Energy Cybernetics (Pty) Ltd, an EOH company.

For more information: • [info@entf.co.za](mailto:info@entf.co.za) • 084 622 4770/084 011 5500 • [www.entf.co.za](http://www.entf.co.za)