



MASTERCLASS IN ENERGY MANAGEMENT OF COMPRESSED AIR SYSTEMS

COURSE OVERVIEW

Compressed air systems hold the key to greater productivity, efficiency and profitability in your facility. You just have to understand where to look and what to do. There is an increasing awareness that the systems approach to design and operation of industrial compressed air systems improves performance and productivity. A properly designed and functioning compressed air system reduces energy consumption and cost.

To optimise overall compressed air system efficiency, it is necessary to evaluate the whole system. Attempting to address individual parts of the system such as compressor control without evaluating issues of air storage, distribution and point of use can lead to incomplete analysis. Poor definition of system issues often results in treatment of symptoms. Failure to deal with the root cause of performance issues inevitably leaves the overall system with poor and inefficient operation.

TARGET AUDIENCES

Engineers, energy manager, facilities managers who are working in the industrial manufacturing sector. This course will benefit companies which make use of compressed air systems.

COURSE OBJECTIVES

In this workshop, you will learn the essentials of the systems approach, including compressed air system design from compressor to end use, piping and fittings, materials, codes and standards. Learn how to optimize the system for performance, to create and maintain balance between system supply and end user demand. And learn to eliminate waste lost due to leakage and inappropriate use of compressed air. You will also gain an understanding of the maintenance issues that apply; the cost of air leakage, the methods of detecting and correcting system faults to ensure smooth operation.

SCEM-PDUs & PEB-PDUs TO BE AWARDED

APPLICABLE FOR PRODUCTIVITY AND INNOVATION CREDIT (PIC)

18 - 20 JULY 2016

9:00AM - 5:00PM

SEAS Training Centre
9 Penang Road, #08-02 Park Mall, Singapore 238459



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PROGRAMME OUTLINE

Session 1: Compressed air systems basics

- Overview
- Types of compressed air systems and their applications
- Systems approach
- Components of an industrial compressed air system
- Uses of compressed air

Session 2: Analysing compressed air needs

- Air quality
- Load profile
- Artificial demand
- Pressure profile
- Sizing an air compressor

Session 3: Inappropriate uses of compressed air, and how the application can be done more efficiently and effectively

Session 4: Compressed air system controls

- Individual compressor control and overall system control of plants with multiple compressors
- Controls and systems performance

Session 5: Compressed air storage

- Control demand events (peak demand periods) via pressure drop and rate of decay

Session 6: Opportunities at component level

- Advantages and disadvantages of various compressor types
- Compressor control mechanism
- Advantages and disadvantages of various air dryer types

Session 7: Maintenance of compressed air systems for peak performance

- Maintenance issues for specific system components
- Leakage
- Lubrication

Session 8: Heat recovery and compressed air systems

Session 9: Benchmark compressed air systems

- Establish current performance levels and costs of compressed air systems and correlate to plant's present production levels

Session 10: Analysis tools for compressed air systems

Session 11: New technologies on compressed air systems

Session 12: Life cycle cost analysis

Session 13: Development of action plan

Session 14: Resources and follow-up strategy

Session 15: Types of systems offered in market

ABOUT THE TRAINER



Mr. Tom Taranto (US Department of Energy (DOE) Qualified Trainer) is an independent compressed air system professional with more than 40 years of experience providing services to industrial clients, utilities and energy agencies. He is the owner of Data Power Services, LLC. He has extensive experience in design and application of fluid power systems both hydraulic and pneumatic. Tom's work involves compressed air system design, air compressor application and performance of related compressed air system components.

He conducts compressed air system assessments, equipment testing and compressed air system training throughout the world.

Tom is a U.S. DOE Energy Expert, Compressed Air Challenge (CAC) technical committee member, a CAC qualified instructor and instructor for Qualified AIRMaster+ Specialist training. Tom is Co-Vice Chair and team member for ASME Standard EA-4-2010 "Assessment for Compressed Air Systems". He is a technical committee member of the International Organisation for Standardisation, technical advisory group Energy Management for Air compressors and compressed air systems. The committee is responsible for Standard ISO-11011 "Compressed air - energy efficiency - assessment" (committee TC118/SC6/WG4).

Tom has authored compressed air articles and peer reviewed conference proceedings. He has published both nationally as contributor to Encyclopedia of Energy Engineering and Technology, Taylor & Francis Group; and internationally as UNIDO Compressed Air Expert co-author and co-trainer for UNIDO Motor System Energy Conservation Program.

Tom is a graduate of Clarkson University, with a Bachelors Degree in Mechanical Engineering. He is a member of ASME, AFE and is past President of the Fluid Power Society, Chapter 21 Syracuse, NY.

RATES

EARLY BIRD (before 14 June)	NORMAL FEE	GROUP FEE
SEAS Member: S\$1,200 (U.P.: S\$1,800) Non Member S\$1,500 (U.P.: S\$2,000)	SEAS Member: S\$1,500 (U.P.: S\$2,000) Non Member S\$1,800 (U.P.: S\$2,200)	S\$1,200.00 (4+ delegates from 1 organization)

* Fees inclusive of GST

* SEAS reserves the right to make changes to the trainer, programme, venue, cancel or reschedule the programme if necessary or warranted by circumstances beyond our control

* Payment to be made by the early bird closing date to enjoy early bird rate

* Enjoy group discount for 4 or more delegates registered at the same time from the same organisation and same billing source

* Only one type of discount scheme is applicable at any one time

* Payment to SEAS & Address: Please send a crossed cheque to:

Sustainable Energy Association of Singapore, 9 Penang Road, #08-02 Park Mall, Singapore 238459

CALL US AT 6337 9886 TO ENQUIRE

REGISTRATION FORM Yes! I would like to register for this programme I am unable to attend but please put me on your mailing list

PARTICIPANT'S DETAILS		Number of Delegates	Fees Payable
1	Name (Dr/Mr/Mrs/Ms)		NRIC No
	HP No	Email	Designation
			PEB <input type="text"/> SCEM <input type="text"/>
2	Name (Dr/Mr/Mrs/Ms)		NRIC No
	HP No	Email	Designation
			PEB <input type="text"/> SCEM <input type="text"/>

ORGANIZATION'S DETAILS

Company Name	
Company Address	
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