

# Technical Automation Services Company

## ENOUGH CHEMISTRY FOR PROCESS ANALYZERS

### THE INSTRUCTOR

Tony Waters has 40 years' experience with process gas chromatographs and other analyzers. He has founded three companies to provide specialized analyzer services to the process industries and is an expert in the application of process analyzers in refineries and chemical plants.

Tony developed these training courses from his long experience in the field. His presentations are always popular, and have equal appeal with engineers and maintenance technicians. The seminar has been presented in Australia and in many of the countries of Asia, Europe, Middle East, North America and South America.

### The Program

As process analyzers become more vital for the control of process optimization, the effective training of engineers and technicians is mandatory. Process analyzers will not achieve the availability needed for advanced control unless instrument engineers are trained in the design requirements for reliable analyzer systems and maintenance technicians are trained to service them.

During the two day class we will cover in detail Understanding 'Terms', Ionic Compounds, Hydrocarbons, and Basic Calculations. Instruction is by lecture and by individual and team exercises. Each student will receive a workbook with copies of the presentation materials and many practical class exercises. Students learn from what they hear, but more from what they do. They also learn by working with others who come to the class with different backgrounds and experiences.

**January 29-30, 2020**

**\$1695.00 per person**

Breakfast and Lunch provided each day

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# TASC

We specialize in Analyzer Systems Integration, Technical Services and Support, Turnarounds, Training and Environmental Consulting and Testing. Since 1990, we have been providing quality products, personnel and services to our customers.

For more information or to register please  
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## ENOUGH CHEMISTRY FOR PROCESS ANALYZERS

### Definition of Terms

- Elements, mixtures and chemical compounds
- Atoms and molecules
- Symbols, formula and molecular structure
- Hands-on class exercises with molecular models
- Introducing two different kinds of chemical bonding
- General properties of ionic and covalent molecules

### Ionic Compounds

- How positive ions are formed
- Negative ions – simple and complex
- What happens in a chemical reaction
- How to balance a simple chemical reaction

### Hydrocarbons

- Introduction to the hydrocarbons
- More exercises with molecular models
- Paraffins, Olefins, Acetylenes, Naphthenes, and Aromatics
- Understanding the meaning of chemical names and abbreviations
- Class exercises in naming a chemical structure and deriving structure from a chemical name

### Simple Calculations

- Atomic and molecular weight
- Calculating gas density
- Unit of chemical quantity: the Mole