



**MAESTRO**  
CONSULTANTS

# **BOILER FEED WATER TREATMENT**

## **COURSE OUTLINE 2020**

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## **TRAINING TITLE**

BOILER FEED WATER TREATMENT

## **VENUE**

Dubai, UAE

## **DURATION**

5 Days

## **DATES**

11 - 15 October 2020

## **PRICE**

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet daily.

## **TRAINING INTRODUCTION**

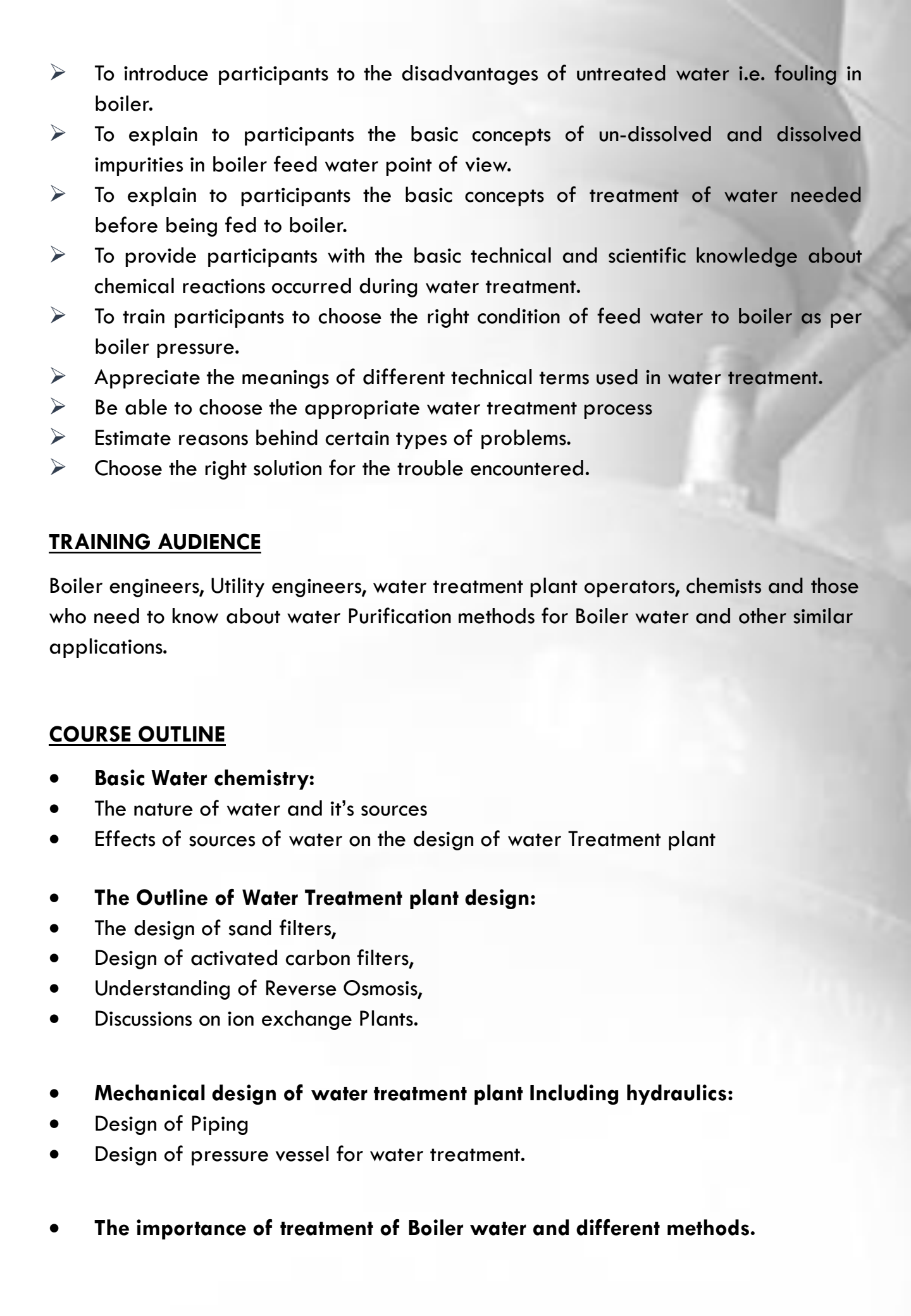
This training course is designed to give a semi-detailed discussion of the subject of Water Treatment Fundamentals with emphasis on the basic Water Chemistry and Water Treatment (WT) required before being fed to Boiler. In order for the course material to suit participants with or without a Water Treatment Plant Operation background, the course will be delivered such a way that most of technical terms and concepts will be clarified by both scientific definition and examples.

The course is divided into five main areas:

1. Basic Water Chemistry;
2. The design of Sand filter, Activated carbon Filters, Softeners, Ion exchange Equipment;
3. Boiler water requirements WRT the Boiler Pressure;
4. De-aerators for Oxygen removal, pH adjustment and other requirements of Boiler Feed water and finally questions and answers.
5. The course is designed for engineers, Technicians who may have or NOT have the WT plant experience.

## **TRAINING OBJECTIVES**

- To familiarize participants with the main concepts and technical terms of water treatment and water treatment plant.

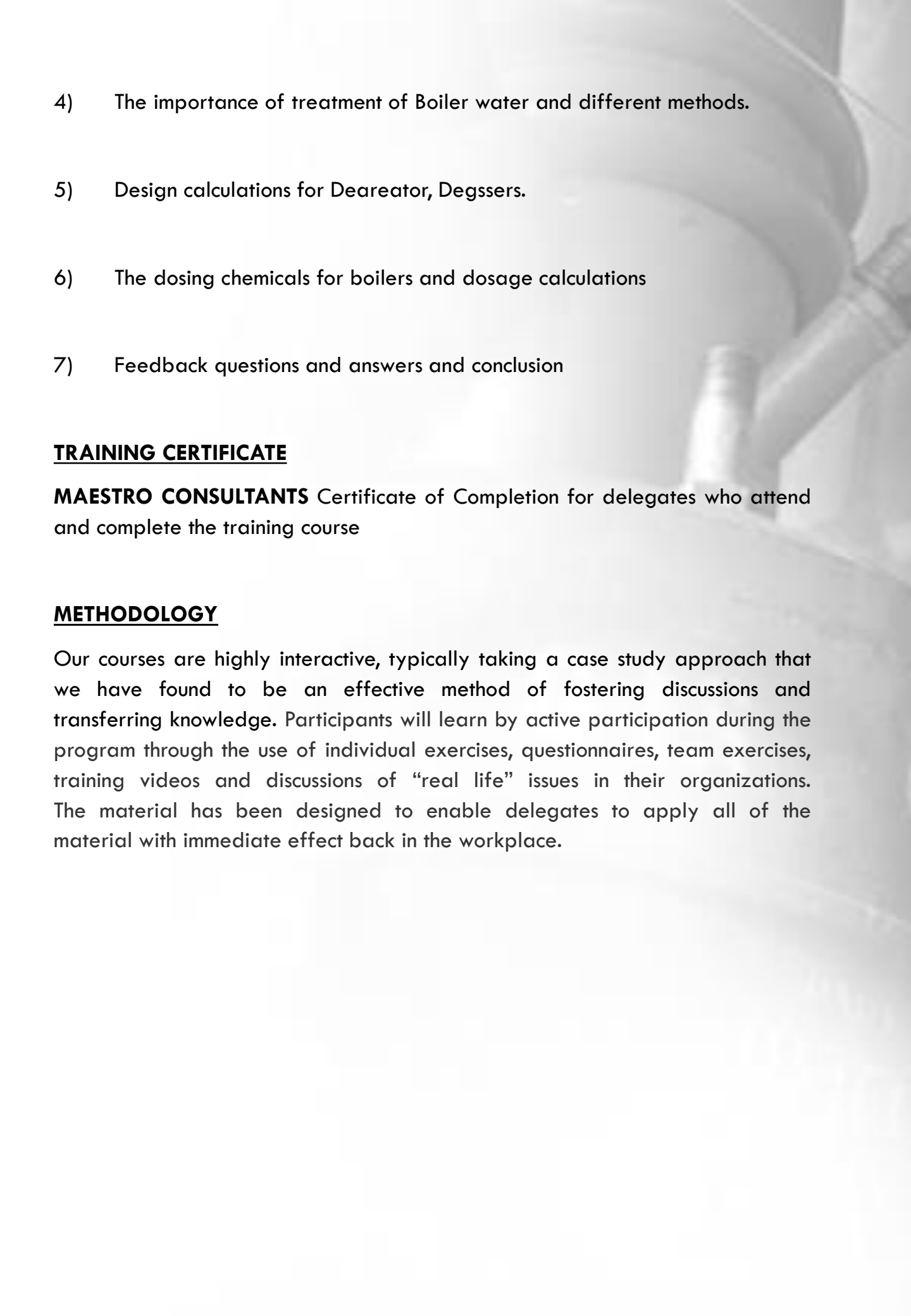
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- To introduce participants to the disadvantages of untreated water i.e. fouling in boiler.
  - To explain to participants the basic concepts of un-dissolved and dissolved impurities in boiler feed water point of view.
  - To explain to participants the basic concepts of treatment of water needed before being fed to boiler.
  - To provide participants with the basic technical and scientific knowledge about chemical reactions occurred during water treatment.
  - To train participants to choose the right condition of feed water to boiler as per boiler pressure.
  - Appreciate the meanings of different technical terms used in water treatment.
  - Be able to choose the appropriate water treatment process
  - Estimate reasons behind certain types of problems.
  - Choose the right solution for the trouble encountered.

## **TRAINING AUDIENCE**

Boiler engineers, Utility engineers, water treatment plant operators, chemists and those who need to know about water Purification methods for Boiler water and other similar applications.

## **COURSE OUTLINE**

- 1) Basic Water chemistry:
  - The nature of water and it's sources
  - Effects of sources of water on the design of water Treatment plant
- 2) The Outline of Water Treatment plant design:
  - The design of sand filters,
  - Design of activated carbon filters,
  - Understanding of Reverse Osmosis,
  - Discussions on ion exchange Plants.
- 3) Mechanical design of water treatment plant Including hydraulics:
  - Design of Piping
  - Design of pressure vessel for water treatment.

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- 4) The importance of treatment of Boiler water and different methods.
  - 5) Design calculations for Deareator, Degssers.
  - 6) The dosing chemicals for boilers and dosage calculations
  - 7) Feedback questions and answers and conclusion

### **TRAINING CERTIFICATE**

**MAESTRO CONSULTANTS** Certificate of Completion for delegates who attend and complete the training course

### **METHODOLOGY**

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.