JUSCHEM SOLUTIONS PRIVATE LIMITED

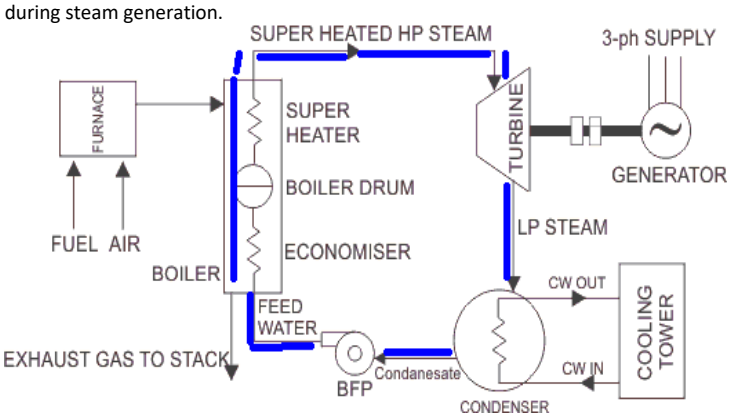
CIN: U52603KA2018PTC112946

Presents 4 Hours-Online (Basics) and 5-Hours-Online (Advanced) training

"Boiler Steam-water cycle Chemistry, importance of the chemistry parameters and Controls"

Introduction

Water and steam are the lifeblood of any steam-driven power facility, and proper chemistry control is critically important to plant operation, reliability, the bottom line, and especially personnel safety. In the last three decades, our understanding of high-pressure water/ steam chemistry has greatly advanced through direct experience and from excellent research and funding by organizations such as the Electric Power Research Institute (EPRI). In spite of research and numerous publications regarding steam generation chemistry, many in the power industry have not yet been properly informed of new developments. This problem is exacerbated by the retirement of many power plant Baby Boomers, which is creating a void in operational knowledge. Many thousands of industrial plants around the world generate high-pressure steam for process applications and power generation. Yet, water/steam monitoring and control often take a back seat to process operations, even though corrosion, scaling and other problems caused by poor water/steam chemistry can cost a plant crore(s) of rupees. Plant operators, engineers and technical personnel should be alert to critical issues regarding water/steam quality during steam generation.



The training seminar will feature:

- Water Chemistry understanding
- Effect of various parameters especially DO and pH
- Understanding the propensity of corrosion
- Corrosion mechanism
- Effect on fuel consumption in Boilers due to blowdown/poor water chemistry control
- What to monitor, what should be the KPI or leading indicators for to understand effectiveness of boiler water chemistry

Training Methodology

This training seminar will be conducted along workshop principles with formal lectures and interactive examples, which will result in the active participation of all delegates. There will be ample opportunities for active, open discussions and sharing professional experiences on various industrial applications.

Objectives

To provide understanding and knowledge to the Operation Engineers on various techniques of chemical controls and their effect on-plant performance and failure. The program will help the Operation Engineers in day-to-day for decision making and also in emergencies.

By the end of this training seminar, the participants will be able to:

1. Identify and understand the importance of chemistry parameters in Boiler/Steam-water cycle
2. Understand the cost-effectiveness of Preventive Maintenance program through chemistry applications
3. Apply techniques of optimisation of fuel by reducing blowdown through proper steam-water cycle chemistry control
4. Make the important decision on the basis of the chemistry parameters
5. Create monitoring systems with trending to assess the chemistry controls and excursions

Organizational Impact

On completion of this seminar the delegates will be able to analyze the operation and maintenance of various dynamics within the boiler water system/steam water cycle chemistry and suggest potential improvement in saving fuel, water and most importantly life of Boiler/HRSG. This training should improve the process control of steam-water cycle and monitoring methodology. Those who think they do not have any problem, will identify what mistake they may be doing

The knowledge gained in this seminar will:

1. Enable the delegates to optimize the fuel consumptions in Boiler.
2. Reduction in boiler tube failures due to water chemistry
3. Give the delegates skill to analyze effectiveness of steam-water cycle chemistry
4. Reduce Corrosion/deposition in steam-water cycle
5. Give better insight to the increase life of Boilers
6. Avoid downtime of production due to corrosion of boiler tube metal

Personal Impact

1. Improved confidence when solving problems of Boiler water
2. Better understanding of how optimized the boiler water treatment is
3. Better knowledge of corrosion mechanism
4. Improved personal skills of taking proactive action on cycle chemistry
5. Better ability to troubleshoot difficult situations in Boilers

Who Should Attend?

This training is addressed to all employees from the fields of **chemistry, mechanical and process engineering**, who are in charge in the operation, planning or servicing of water treatment plants for boiler feed water and steam. The training aims to explain the elementary chemical background as well as to sensitize the participants on possible causes of errors during operation of water treatment plants.

1. Power Plant Chemistry personnel
2. All Boiler Operators and Power station operation personnel
3. Boiler Maintenance Personnel

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Agenda

Day 1 (4 – hours online (Basics)	Day 2 (5 – Hours Online (Advanced)

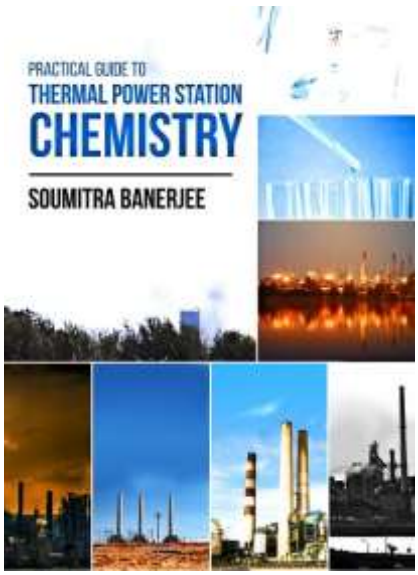
• Water Chemistry of stream-water cycle
• Significance of parameters in steam-water cycle
  • pH
  • DO
  • Cl-
  • Conductivity
  • Fe
• Corrosion of metal
• Water analysis – Requirement
• Formation of a protective layer
• Boiler Tube Failure mechanisms due to water chemistry
	• International Guidelines
	• Transportation of corrosion products and deposits
	• Steam impurities
	• Chemical conditioning of water-steam cycle
	• Logic of the standard values of chemistry parameters and their analytical monitoring
	• Troubleshooting
	• Chemical program selection
	• Minimize blowdown
	• PT, AVT(R), AVT(O) and OT migration steps
	• Summary and discussion

Various Workshops on Dynamics of cooling water treatment and monitoring of heat exchangers, Mechanism of Boiler tube failure and CAPA, Water and waste water treatment, Best practices of RO plant operations were conducted in past from July 2018 to February 2019, at Kolkata, New Delhi, Mumbai, Kochi, Bellary, Bengaluru & Chennai. 19 Workshops were conducted at various locations. There was tremendous over whelming response with minimum of 1000+ participants. The participants from various private & public sectors, GHCL, BASF, Torrent power, Numligarh refineries, Century paper, J K Cement, Delta paper mills, Forbes Marshall, Green star fertilizer, Vasavdutta Cement, Tamil Nadu Paper Ltd, PWD Mumbai, BPCL Mumbai, BPCL Kocchi, IFFCO, reliance power, reliance petroleum, MRPL, CLP, Dalmia Cement, National Fertilizers-Naya Nangal, National Fertilizers- Panipat, Berger Paints India Limited, Gharda Chemicals Ltd, Fermenta Biotech Limited, KEPCO Plant Service & Engineering Co., Ltd, JBF Industries Limited, P.I Industries, CESC, Bengal electric company, Bhushan power and steel ltd., JSW, KPCL, TAQA Neyveli Power Pvt Ltd participated.

S Banerjee, Consultant- Director of a multinational companies

Expert Profile Mr. S Banerjee – Mr. S Banerjee is a seasoned professional with in-hand experience of about 30 yrs. He has worked with India's Pioneer Water Treatment Company and with Giant Private Companies in India viz. Tata Power, Adani Power, Jindal Power, C K Birla Group and Bajaj Hindustan (LPGCL).

Mr. S Banerjee has also published a book titled "Practical Guide to Thermal Power Station Chemistry"




Foreword

Course Fees:

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