INTERNATIONALWATERCONFERENCE

OVERVIEW

An abstract is an overview of what a reader is to expect if they decide to read your paper. It should be enticing enough to make someone take the extra step to find your paper or continue reading. If the abstract lacks information the reader will not continue reading and the information you wanted to disseminate will not be utilized.

WHY WRITING A STRONG ABSTRACT IS IMPORTANT

- Helps the conference organizers decide if your project/study/analysis fits the conference criteria
- Helps the conference attendee decide whether to attend your presentation

TITLE

Although, the abstract is important, the title is a close second. A short, concise title is most effective. Make sure the title focuses on the overall theme of the paper. You should limit the length of the title to no more than 10-15 words.

KEYWORDS

Today people search for papers in archives based on keywords or phrases. The goal is to select 6 or less keywords that emphasis different topics mentioned in your paper. Again, these keywords should appear more than once throughout your paper.

ABSTRACT

The abstract should describe the entirety of your paper and also give a concise summary of the findings. The Abstract should not include diagrams or references. The abstract length should be a minimum of 150 words with a maximum of 400 words for the International Water Conference.

Make sure you focus on the following:

- What is the topic, purpose, or research question you are discussing?
- What method/research did you use?
- Describe the finding from your method/research.
- What were your conclusions or recommendations?

The IWC does not permit abstracts or papers containing marketing commercialization and does not allow more than one use of trade names or logos in papers and presentations. Thereafter, generic identification is required for all products, processes and companies. Examples are provided in the appendix.

INTERNATIONAL WATER CONFERENCE TIPS

We encourage the following:

- New and/or innovative content rather than rehash of prior work
- Technical rather than commercial presentation
- Make sure to read the abstract submission instructions
- Don't wait until the last day to prepare your abstract
- Have someone with experience review your abstract before submission
- Double check for spelling errors and typos
- Meet the word count limitation set by the IWC

ADDITIONAL RESOURCES

ACPI - Academic Conferences and Publishing International Limited (2013) "Abstract Guidelines for Papers" http://www.academic-conferences.org/policies/abstract-guidelines-for-papers/

Koopman, Philip (1997)"How to Write an Abstract" Carnegie Mellon University https://users.ece.cmu.edu/~koopman/essays/abstract.html

Purdue OWL staff (2017) "Writing Scientific Abstracts" https://www.google.com/search?q=how+to+write+a+scientific+abstract&rlz=1C1GCEA_enUS765US765&oq=how+&aqs=chrome.0.69i59l3j69i57j69i60l2.2071j0j7&sourceid=chrome&ie=UTF-8

APPENDIX

EXAMPLES

IWC 17-15: Planning Ahead to Minimize Chemistry Challenges During Combined Cycle Power Plant Commissioning

Colleen Layman, HDR, Whitewater, WI

KEYWORDS: Steam Turbines, Commissioning, Combined Cycle, Cycle Chemistry, Engineering Design

ABSTRACT: The time required to commission a combined cycle power plant can vary substantially, with delays potentially having a significant impact on the overall cost of the project or resulting in lost production revenue. One of the biggest variables in this equation can be the time required to achieve and maintain satisfactory water and steam cycle chemistry. Although they may not appear to be relevant at the time, many decisions made during the project development and detailed engineering design phases can have a significant impact on the plant's ability to achieve and maintain chemistry later during the start-up and commissioning phases. No start-up ever goes perfectly, but appropriate planning early in the project cycle significant improves the odds of minimizing chemistry holds and the need for costly and schedule-wasting heroic measures later.

This paper will explore the important factors that should be considered when planning for commissioning of combined cycle power plants focusing on critical items or steps related to the steam/water cycle and chemistry. It will focus on items of note that should be considered during the engineering design and construction phases of the project such as equipment selection and specification, incorporation of testing and commissioning provisions into design, shop testing and inspection, and cycle chemistry process and procedure development. The discussion will include not only best industry practices, but will also include lessons learned from past commissioning experiences.

IWC 17-13: Consensus on Pre-Commissioning Stages for Cogeneration and Combined Cycle Power Plants

Edward (Ted) Beardwood, Solenis LLC, Wilmington, DE

KEYWORDS: Heat Recovery Steam Generators, Steam and Gas Turbines, Power Generation

ABSTRACT: The Combined Cycle Task Group for the Water Technology Subcommittee of the ASME Research and Technology Committee On Water and Steam in Thermal Systems have prepared this 90 page report (ISBN: 978-0-7918-6126-4) and is now available to the public. The presentation will introduce the elements of the consensus report and highlight some of its features. The time required to commission a combined cycle power plant can vary substantially and affect the overall cost of the project prior to commercialization. A number of pre-commissioning delays have been experienced in the independent power producing industries that are associated with the critical path of these projects. Experience has shown that failure to consider the complex interrelationships between the various component systems can result in costly delays in project completion and turn

over dates. Additionally, incorrect procedures and planning can result in damage or failure of key pieces of equipment or systems during subsequent operation.
This document provides guidance on design, procurement, and pre-commissioning activities that will result in the construction of a plant with steam/water-wetted surfaces that are as clean and corrosion-free as practical. Issues can surface during the commissioning of a combined cycle power plant that cause unintended delays, cost overruns, increased post start-up maintenance, and depreciation of equipment. Consensus recommendations have been developed to minimize these risks and improve long-term reliability.

The material contained in the document is also transportable and transferable to other steam generation systems. A number of teachings are also provided for the user's development, to high light a few:

- System component / unit processes required for the plant design
- Predesign water analysis requirements
- External treatment selection
- Internal treatment selection
- Scheduling and operating pre-cleaning, pre-passivation and turbine starts for pre-commissioning
- Identification of corrosion mechanisms and the avoidance of premature failures
- Individual topics of discussion are as follows;
    - Avoiding Premature Failures
    - Project Development Considerations
    - Project Design Specifications
    - Off Site Fabrication and Assembly
    - On-Site Construction
    - Make-Up Water Treatment Plant Start-Up
    - Initial Hydrostatic Test and High-Velocity Flush
    - Heat Recovery Steam Generator Cleaning and Passivation
    - Steam Blow Cleaning of Steam Piping
    - Turbine
    - Turbine Commissioning
    - Start-Up, Shutdown and Lay-Up
    - Glossary
    - References (49)
    - Damage/Corrosion Mechanisms

IWC 17-21: Analyzing a Water Analysis

Dennis McBride, Burns & McDonnell, Kansas City, MO

KEYWORDS: analyses, analysis

ABSTRACT: The process of designing, operating, and troubleshooting a water treatment system almost always begins with a water analysis. This analysis may be performed in a specialty laboratory, in a plant lab, or by personnel in the field. Each method has its advantages as well as disadvantages. Unfortunately, many times the analysis may be flawed (e.g. does not balance ionically), reported

poorly (e.g. reported units not included in the report), or misunderstood by the recipient charged with its use (e.g. recipient does not consider the units reported, critical species may change in transport to the lab). This paper will talk about the differences between a potable and an industrial water analysis, which chemical species may be critical in an industrial water analysis, the importance of reporting and understanding the units, normal variability in various samples (i.e. well water versus surface water), as well as some tricks in evaluating the analysis for balance and completeness.

IWC 17-64: A Field Friendly Bio-Film Monitoring Procedure for Cooling Tower Water-Offering the Potential to Minimize the Risk of Legionnaires Disease

Paul Puckorius, Puckorius & Associates, Inc. Water & Waste Water Consultants, Westminster, CO;
Dr. John Dresty, Jr., Griswold Water Systems, Inc., Glastonbury, CT

KEYWORDS- Legionella, Bio-film, cooling water, Legionnaires Disease, cooling tower water systems, Bio-monitoring

ABSTRACT: Testing for Legionella Bacteria by water samples from cooling water may not be providing an accurate assessment of their presence.

Recent Legionnaire Disease out breaks due to cooling tower water systems during 2015 and 2016, such as in New York City and Flint, Michigan, as well as the issuance of ASHRAE Standard 188-2015, an in depth study was initiated to develop a more effective microbiological monitoring procedure.

The result was the development of a "field friendly" bio-film monitoring procedure that could provide the potential to minimize the risk of Legionnaires Disease from cooling tower water systems.

This paper provides the details of the Bio-film monitoring procedure which includes the use of Bio-film monitoring coupons that are used to capture any bio-mass that maybe present in the cooling tower water system. Since Legionella Bacteria are known to be in the bio-mass the monitoring of the bio-mass would be a more accurate assessment of the presence of Legionella Bacteria.
This paper also provides the results of an independent field evaluation of an operating cooling tower water system which illustrates the effectiveness of this field friendly and low cost microbiological monitoring procedure for detecting the presence of any bio-film and thus the possible presence of Legionella Bacteria.

REFERENCE

The Official Conference Proceedings of the 2017 International Water Conference®

https://www.eswp.com/water