

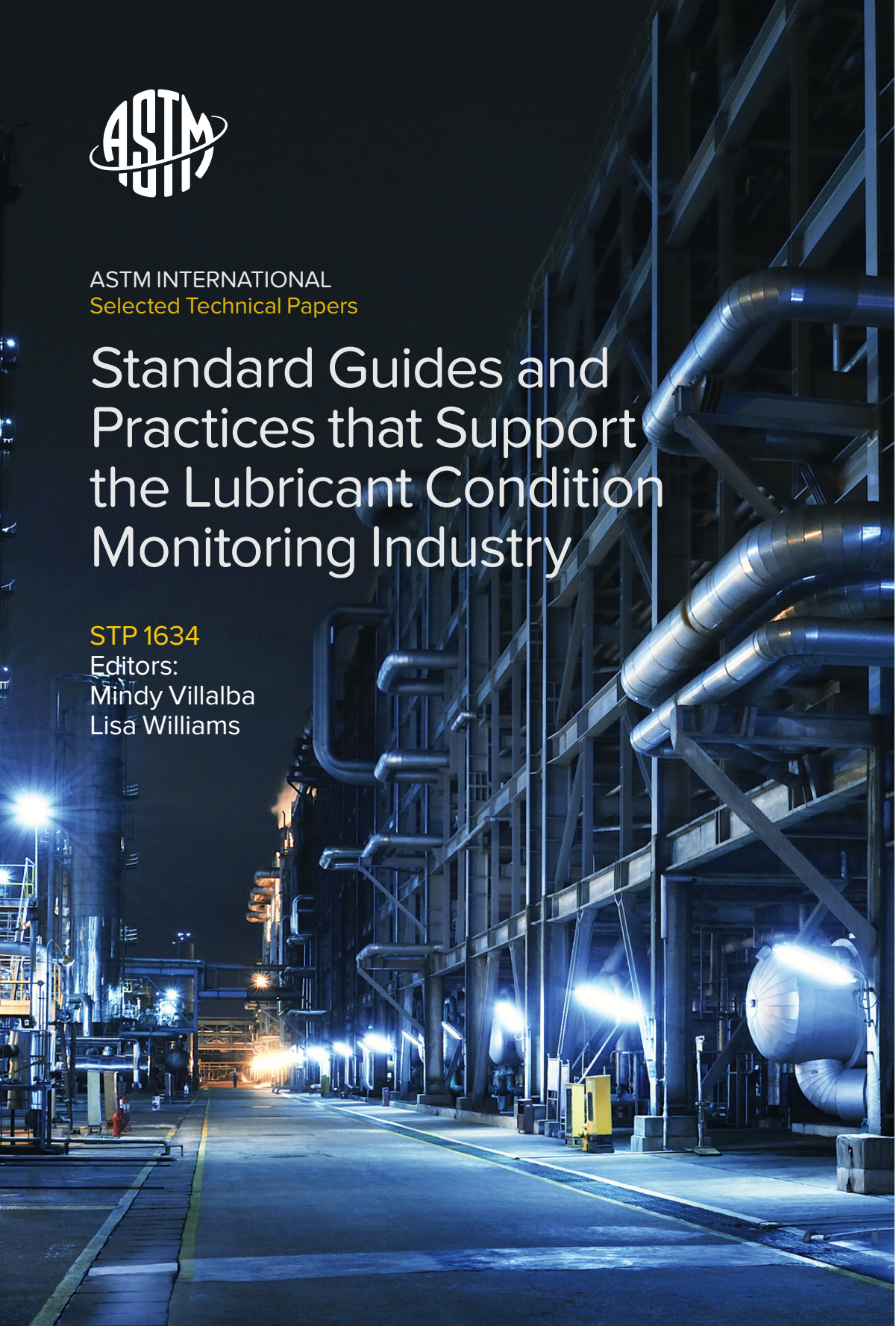


ASTM INTERNATIONAL  
Selected Technical Papers

# Standard Guides and Practices that Support the Lubricant Condition Monitoring Industry

STP 1634

Editors:  
Mindy Villalba  
Lisa Williams





**SELECTED TECHNICAL PAPERS**  
**STP1634**

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# Standard Guides and Practices that Support the Lubricant Condition Monitoring Industry

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## Foreword

THIS COMPILATION OF Selected Technical Papers, STP1634, *Standard Guides and Practices that Support the Lubricant Condition Monitoring Industry*, contains peer-reviewed papers presented at a symposium held June 26–27, 2022, in Seattle, Washington, USA. The symposium was sponsored by ASTM International Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants, Subcommittee D02.96 on In-Service Lubricant Testing and Condition Monitoring Services, and Subcommittee D02.C0 on Turbine Oils.

Symposium Chairs and STP Editors:

Mindy Villalba  
*SGS North America, Inc.*  
*Vallejo, CA, USA*

Lisa Williams  
*Ametek Spectro Scientific*  
*Chelmsford, MA, USA*



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## Overview

The foundation of a lubricant condition monitoring program is the ability to obtain accurate and informative data that can be related to how the machine and/or lubricant may fail. In the last ten years, there have been many industrial advances that significantly impacted the lubricant condition monitoring industry. We've seen these advances impact instrumentation, lubricant formulation, data analytics and delivery, software, and asset management. End-users have many different sources to obtain high quality test data to support their lubricant condition monitoring programs. Some may choose to outsource samples to a third-party lab, while others may perform the work on-site. Whichever path is chosen, the most important concepts that must be followed lie in the proper measurement and analysis of the data to make critical and effective maintenance decisions. These advancements in lubricant condition monitoring are managed by ASTM D02 Subcommittees D02.96 and D02.C0. Both subcommittees' primary responsibility is to promote knowledge and innovation within each standard to ensure the appropriate tests are performed, and data is correctly implemented at the end-user level.

The subsequent pages of this document contain the presentations delivered at the ASTM D02 Subcommittee D02.96 and D02.C0 co-sponsored symposium "Standard Guides and Practices that Support the Lubricant Condition Monitoring Industry" that was held on June 26–27, 2022 in Seattle, Washington, USA. In this publication, there are a variety of innovative topics designed to take the end-user through the entire process of lubricant analysis, from sampling best practices to the most in-depth analysis techniques available to date with one goal in mind: help the end-user run the right test and implement the data accordingly. Each one of these papers helps the end-user get closer to the ultimate goal of lubrication excellence within their facility.

This publication was a labor of love and dedication from all those involved. The hope of meeting in 2020 to hold an in-person symposium quickly diminished with the onset of the COVID-19 worldwide pandemic, which shut down travel completely in 2020 and most of 2021. We truly appreciate the persistence of all



those involved in this publication and the in-person forum that was successfully completed in 2022. Thank you.

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