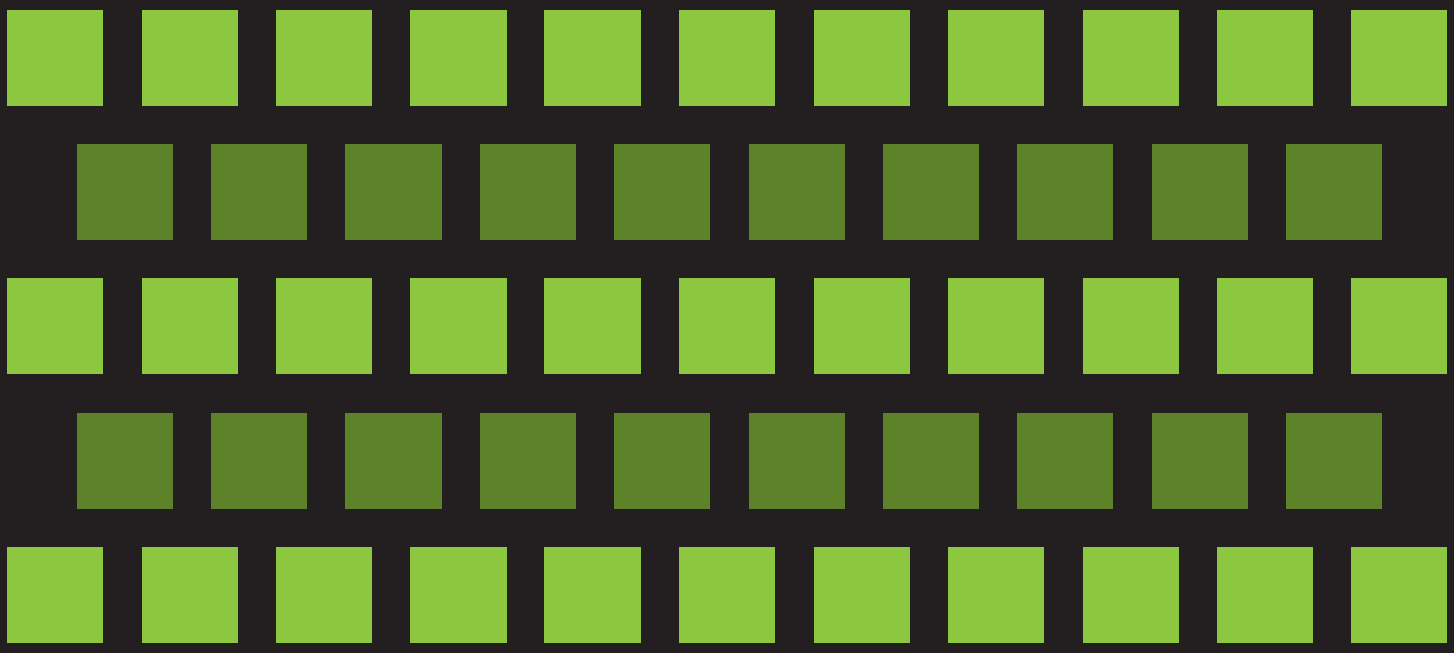
STP-PT-054

CONCENTRATED SOLAR POWER (CSP) CODES AND STANDARDS GAP ANALYSIS



ASME STANDARDS TECHNOLOGY, LLC

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CONCENTRATED SOLAR POWER (CSP) CODES AND STANDARDS GAP ANALYSIS

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FOREWORD

The report provides an analysis of the ASME codes and standards that apply to Concentrated Solar Power (CSP) technologies to determine the gaps in the codes and standards and where there may be additional codes and standards work required to implement and commercialize CSP.

Established in 1880, the American Society of Mechanical Engineers (ASME) is a professional not-for-profit organization with more than 127,000 members promoting the art, science and practice of mechanical and multidisciplinary engineering and allied sciences. ASME develops codes and standards that enhance public safety, and provides lifelong learning and technical exchange opportunities benefiting the engineering and technology community. Visit www.asme.org for more information.

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ABSTRACT

Numerous concentrated solar power (CSP) facilities have been in successful commercial operation for the past 25 years. Recently, government incentives and advances in cost reduction have brought many new players into the field. An accelerated deployment of CSP is currently being seen worldwide. Many of the developing technologies in CSP have failure modes and effects different from those treated by existing boiler and pressure vessel codes. This study is a gap analysis to identify differences between the safety regulation needs of emerging CSP technologies and existing ASME Boiler and Pressure Vessel codes (BPV). Six leading CSP technologies are examined. The safety related failure modes of these systems are identified and compared with existing Code rules to identify gaps in code coverage. Recommendations for actions to close these gaps are proposed.