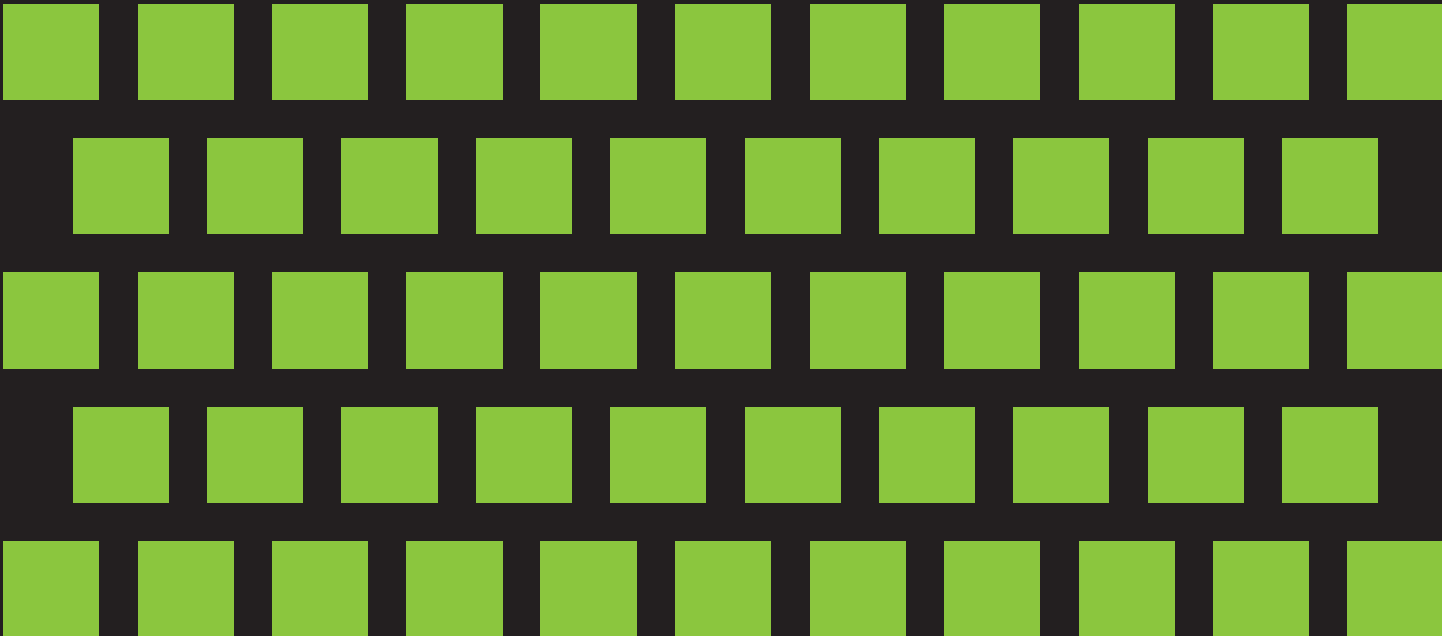


# DEGRADATION OF NOTCH TOUGHNESS BY A POST WELD HEAT TREATMENT (PWHT)



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STP-PT-033

# DEGRADATION OF NOTCH TOUGHNESS BY A POST WELD HEAT TREATMENT (PWHT)

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## FOREWORD

This report is a natural follow-up to three major studies sponsored by the ASME that address a number of Post Weld Heat Treatment (PWHT) issues. It should be noted that early publications identified a PWHT as a highly desirable treatment for weldments. As will become evident from the review that follows and the summary of key observations, this recommendation is suitable for some steels and unsuitable for others. The purpose of the report is to provide information and recommendations for consideration by the ASME Code writing committees. The observations made in the various documents reviewed, summarized as “Key Observations,” are the bases for the recommendations that are made for possible revisions in ASME Code rules for PWHT practices.

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## **ABSTRACT**

This report is a review of the literature on post weld heat treatment of steels used in ASME Code construction. Based on this review, recommendations are made for use by the ASME Code writing committees on issues that these committees should consider. Examples of changes include the elimination of a mandatory PWHT for steels used in all lethal service and the use of fracture mechanics studies to justify departures from present ASME Code rules when a PWHT is not needed to address issues such as dimensional control and/or stress corrosion cracking.