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Measurement Uncertainty for Fluid Flow in Closed Conduits

ANSI/ASME MFC-2M-1983

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FOREWORD

(This Foreword is not part of American National Standard, Measurement Uncertainty for Fluid Flow in Closed Conduits, ANSI/ASME MFC-2M-1983.)

This Standard was prepared by Subcommittee 1 of the American Society of Mechanical Engineers Standards Committee on Measurement of Fluid Flow in Closed Conduits.

The methodology is consistent with that described in:

Joint Army, Navy, NASA, Air Force Propulsion Committee (JANNAF). ICRPG Handbook for Estimating the Uncertainty in Measurements Made with Liquid Propellant Rocket Engine Systems. CPIA Publication 180. AD 851127. Available from NTIS, 5285 Port Royal Road, Springfield, VA 22161.

U.S. Dept. of the Air Force. Arnold Engineering Development Center. Handbook: Uncertainty in Gas Turbine Measurements. USAF AEDC-TR-73-5. AD 755356. Available from NTIS, 5285 Port Royal Road, Springfield, VA 22161.

The Committee is indebted to the many engineers and statisticians who contributed to this work. Most noteworthy are J. Rosenblatt and H. Ku of the National Bureau of Standards for their helpful discussions and comments. The measurement uncertainty model is based on recommendations by the National Bureau of Standards. D. R. Keyser suggested the alternate model and other changes. B. Ringhiser programmed the Monte Carlo simulations for uncertainty intervals and outliers. Encouragement and constructive criticism were provided by:

G. Adams, *Chairman*, The Society of Automotive Engineers, Committee E33C, USAF, WPAFB, ASD
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This Standard was approved by the ASME Standards Committee on Measurement of Fluid Flow in Closed Conduits and subsequently adopted as an American National Standard on March 17, 1983.

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