

A  
HANDBOOK  
BY  
**John E. Hewson**



INSTRUMENT SOCIETY OF AMERICA

**PROCESS INSTRUMENTATION MANIFOLDS**  
**Enlarged Edition**

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# **Process Instrumentation Manifolds**

THEIR SELECTION AND USE

**Enlarged Edition**

**Process  
Instrumentation  
Manifolds**

**Enlarged Edition**

This book is dedicated to the advancement of Instrument Engineering as expressed in the application of field-located instruments through the work of the specification engineer, the installation design engineer, and the plant maintenance technician.

In essence, it is dedicated to the younger, less-experienced instrument engineers, designers, and maintenance technicians, with the hope that the experience of the many people represented here will make their efforts more meaningful.

# Preface to the Enlarged Edition

In order to be of the greatest practical use, this handbook should reflect those advances and applications that have been made since the first edition was published.

New manifold designs and improvement modifications are detailed in Section F. The original five sections have been updated to reflect corrections and modernization of some products.

Notably, in Section F there are new manifold designs that address microprocessor/computer applications making it possible to automatically zero the transmitter and provide a maintenance "alert" signal for the transmitter/manifold assembly.

Other products in Section F are generally aimed at lowering installation costs.

John E. Hewson  
Houston, Texas  
March 1985

# Preface to the First Edition

This book is designed to help the young engineer, designer, or technician visualize the possibilities open for the installation of instruments applied to differential pressure for flow, level and density, and static pressure measurements.

Since field installations are highly vulnerable to various industry and company practices, historical inertia, individual opinions, and other regulations, the illustrations and written material will be subject to interpretation by the reader for the particular application.

Although a great deal of installation design and layout has been done for all types of applications, it is isolated in the files of individual companies. After considerable library research, this writing appears to be the first to represent installations in terms of the type of instruments used and their location with respect to the primary measuring element. It is hoped that this work will initiate feedback and a delineation of information from company files for the benefit of all.

John E. Hewson  
Houston, Texas  
June 1981

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The contents presented are more valuable because of the reviews of several people. Les Driskell, Consulting Engineer (Pittsburgh, Pa.), reviewed the entire manuscript and provided valuable comments and suggestions. Harry P. Bean, Superintendent of Measurement, El Paso Natural Gas Co., filled the voids in the historical section and added useful comments.

My wife's dedicated assistance and constant encouragement, usually at the expense of her plans, and reviews of the several manuscripts were paramount to the completion of the book.

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J. E. H.

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