

THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

# **GUIDE FOR THE PROCUREMENT OF VALVES FOR LOW TEMPERATURE (NON-CRYOGENIC) SERVICE**

**PUBLICATION N° 192 : 1998**

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45 Beech Street  
LONDON  
EC2Y 8AD

Telephone: 0171-628 7878  
Fax: 0171-628 7862



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## FOREWORD

The requirements for process valves operating under moderately cold conditions, unlike those for cryogenic service, do not appear to be covered in a consistent way by published codes and standards. The EEMUA Valves Technical Committee (VVS) has therefore developed this Guide to meet this need, drawing from the extensive experience of its member companies in the oil, gas and chemical industries.

### Units

This document employs SI units, but may include Imperial units where appropriate to common usage.

*Note:* 'bar' signifies gauge pressure.

## 1 INTRODUCTION

This document provides guidance for purchasers, specifiers and users of valves which will, during their service lives, experience low temperatures not extending into the cryogenic region, i.e. not lower than minus 50°C (the arithmetic symbol (-) will be used hereafter).

Whilst standards and practice for cryogenic application are reasonably well established (e.g. conformance to BS 6364), requirements for valves intended to operate in less severe low temperature conditions have varied widely. The intention of this Guide is to alert the user/ specifier to the factors which need to be taken into account as well as to provide the information to be transmitted to the supplier if in-service problems are to be avoided. It is hoped that, as a result, suppliers will be presented with a clear picture of what is required, particularly in regard to the difference between normal and transient operating conditions.

Readers' attention is drawn to the following related EEMUA publications:

- Pub. 153, in particular Appendix SA, 'Requirements for Carbon, Carbon-Manganese, and Some Low Alloy Steel Piping for Application Below 0°C'
- Pubs 170, 171, 172 and 173 which provide detailed requirements for production testing of ball, plug, gate, globe and butterfly valves
- Pub. 182 which comprises a specification and application guidance notes for integral block and bleed manifolds directly connected to pipework.

## 2 SCOPE

The Guide covers the requirements for valves having a low temperature design duty between 0°C and -50°C. It has been written with the more common valve types in mind (i.e. gate, globe, ball, plug, butterfly) but is generally applicable to all types.

*Note.* When applied to types less frequently encountered, care should be exercised to ensure applicability and identify any additional requirements which may be necessary.