

HVCA

GUIDE TO GOOD PRACTICE

**Heating and
Ventilating
Contractors'
Association**

SITE PRESSURE TESTING OF PIPEWORK



TR/6

HVCA

*Knowledge
is Power...*



Publications

Whether your need is for information, advice or guidance on the technical, commercial, health and safety or any other aspect of business, the wide range of specialist publications produced by the HVCA may well provide the answers you are seeking

HVCA Publications represent the result of dedicated and untiring efforts on the part of a host of individual experts, and many have long been established as industry standards, both in this country and overseas

For a full list of available titles, please contact the HVCA Publications Unit on

01768 860405

or our website at

www.hvca.org.uk

HVCA Publications

Old Mansion House

Eamont Bridge

Penrith

Cumbria

CA10 2BX

Guide to Good Practice

TR/6 *for Site Pressure Testing of Pipework*

Acknowledgements

Members of the Drafting Panel who compiled this guide

The HVCA wishes to record its sincere thanks to the following; without whose direct input of knowledge, time and experience this publication would not have been produced.

Steve Bradshaw

John Thompson

Chris Parsloe - Consultant

Alan Keating – Secretary

The HVCA also wishes to acknowledge the input from BSRIA, CIBSE, IPHE, APHC, together with the members of the Technical Committee for their time and input.

HEATING AND VENTILATING
CONTRACTORS' ASSOCIATION
34 Palace Court, London W2 4JG
Telephone: 020 7313 4900
www.hvca.org.uk Email: contact@hvca.org.uk

ISBN 0-903783-53-3

First published

1980

©2006 HVCA

FOREWORD



This latest authoritative publication from the HVCA - on the site pressure testing of pipework - represents the latest revision of the suite of technical standards that underpins the HVCA's independent member inspection and assessment regime.

The content of this edition has been updated to reflect current best practice, and includes testing standards for the ever-increasing range of pipework materials now available throughout the industry.

Adherence to the *Guide to Good Practice: Site Pressure Testing of Pipework* will ensure that the correct procedures are followed at all times, and that customers and end users can be sure of a job well done every time.

The revision of the publication took place under the watchful eye of Ray Williams, my predecessor as chairman of the HVCA Technical Committee.

Sadly, Ray died - in August 2005, at the age of only 59 - before seeing the project carried to completion. Ray joined national contractor Drake & Scull - now EMCOR Drake & Scull - in 1988 to establish an m&e design capability within the company's London region, and was subsequently responsible for a number of successful developments, including refurbishment of the celebrated Langham Hotel.

In 1993, he assumed the design lead for the Jubilee Line Extension, and remained a key member of the management team until the successful completion of the project in 2000.

In his capacity as engineering director, Ray Williams played a major part in developing the company's engineering management processes - and more recently, as EMCOR's rail bid manager, headed the joint venture engineering team in its successful bid for the prestigious St Pancras project.

Described by his employer as "a person of considerable ability and immense integrity", Ray Williams enjoyed a career in both consulting and contracting that encompassed many memorable contracts, not least among which was the Sultan Qaboos Hospital in Oman.

It is entirely fitting, therefore, that this publication be dedicated to Ray's memory.



Graham Manly
Chairman
HVCA Technical Committee



Ray Williams

CONTENTS

	<i>Page</i>
FOREWORD	3
Section 1 INTRODUCTION	5
Section 2 DEFINITIONS	5
Maximum Working Pressure	5
Nominal Pressure Rating	5
Test Pressure	5
Section 3 SELECTION OF TEST PROCEDURE	6
Table 1: Alternative testing procedures	6
Health and Safety Legislation	6
Test Procedures for specific systems	7
Table 2: Test procedures applicable to different system types	7
Section 4 HYDRAULIC PRESSURE TEST WITH WATER	8
When to Test	8
Filling the System	8
Test Procedure for all Metal Systems	9
Test procedure for Systems Containing Plastic Pipes	9
Draining the System	10
Underground Cold Water Supply Mains	10
Section 5 PNEUMATIC LEAK TEST FOLLOWED BY HYDRAULIC PRESSURE TEST	11
Section 6 PNEUMATIC LEAK TEST FOLLOWED BY PNEUMATIC PRESSURE TEST	12
Pneumatic Leak Test	12
Pneumatic Pressure Test	12
Test procedure for all Metal Systems	12
Test Procedure for Systems Containing Plastic Pipes	12
Pressure Test Certificate	13
BIBLIOGRAPHY AND SOURCES	14
References	14
HVCA Publications	14
CIBSE Publications	14
BSRIA Publications	14
British Standards	14
HSE Publications	14
MISCELLANEOUS	14
Institute of Gas Engineers and Managers (IGEM) Utilisation Procedures	14
British Compressed Gases Association (BCGA)	14