ISO 15086-2:2000-02 (E)

Hydraulic fluid power - Determination of fluid-borne noise characteristics of components a nd systems - Part 2: Measurement of speed of sound in a fluid in a pipe

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Symbols and subscripts 2

5 Instrumentation 3

6 Hydraulic noise generator 4

7 Test conditions 5

8 Test rig 5

9 Test procedure for Method 1 9

10 Test procedure for Method 2 10

11 Test report 11

Annex A (normative) Errors and classes of measurement of mean value 13

Annex B (normative) Errors and classes of dynamic measurement 14

Annex C (normative) Data reduction algorithms 15

Annex D (informative) Example of speed of sound calculation in MATLAB® language using three pressure transducers in a pipe (Method 1) 21

Annex E (informative) Example of speed of sound calculation in MATLAB® language using two pressure transducers in a closed-end pipe (Method 2) 25

Bibliography 27