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Hydraulic fluid power — Filter elements — Determination of fabrication integrity

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FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2942 was drawn up by Technical Committee ISO/TC 131, *Fluid power systems and components*, and circulated to the Member Bodies in November 1972.

It has been approved by the Member Bodies of the following countries :

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France

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Hydraulic fluid power — Filter elements — Determination of fabrication integrity

0 INTRODUCTION

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Filters maintain fluid cleanliness by removing insoluble contaminants.

The filter element is the porous device which performs the actual process of filtration.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for determining the fabrication integrity of a hydraulic fluid power filter element, i.e. the acceptability of the filter element for further testing and use.

This International Standard is not intended to be used for measuring filter element performance.

2 REFERENCES

ISO/R 1219, *Graphical symbols for hydraulic and pneumatic equipment and accessories for fluid power transmission.*

ISO . . ., *Fluid power — Vocabulary.* [1)]

3 DEFINITIONS

3.1 fabrication integrity : The physical acceptability of a filter element relative to that designated by the filter manufacturer.

3.2 For definitions of other terms used, see ISO . . . .

4 GRAPHICAL SYMBOLS

Graphical symbols used are in accordance with ISO/R 1219.

5 EQUIPMENT

5.1 Bubble point testing apparatus as shown in the figure.

5.2 Clean *iso*propanol or an alternative liquid designated by the filter element manufacturer. The cleanliness is to be consistent with subsequent test requirements.

6 PROCEDURE

6.1 Verify compliance of the filter element with the manufacturer's drawing(s).

6.2 Install a clean filter element in the bubble point testing apparatus with the major axis of the filter element parallel to the surface of the liquid.

6.3 Submerge the element until it is covered by 12,5 mm of liquid at room temperature, 15 to 40 °C.

NOTE — Reasonably consistent tests can be expected with the fluid in the temperature range given in this International Standard.

6.4 Allow the filter element to remain submerged in the liquid for 5 min before proceeding.

NOTE — The arbitrary 5 min soak is to ensure that the filter element is wetted.

1) In preparation.