

Evaluating particulate contamination of hydraulic fluids —

Part 2: Method of calibrating liquid automatic particle-count instruments (using AC Fine Test Dust contaminant)

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machinery and Components Standards Policy Committee (MCE/-) to Technical Committee MCE/18, upon which the following bodies were represented:

- Advanced Manufacturing Technology Research Institute
- Association of British Mining Equipment Companies
- British Compressed Air Society
- British Fluid Power Association
- British Hydromechanics Research Group
- British Steel Industry
- Department of Trade and Industry (National Engineering Laboratory)
- Ministry of Defence
- University of Bath

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- British Railways Board
- Society of Motor Manufacturers and Traders Ltd.

This British Standard, having been prepared under the direction of the Machinery Components Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 June 1992

© BSI 05-1999
First published January 1978
Second edition June 1992

The following BSI references relate to the work on this standard:
Committee reference MCE/18
Draft for comment 90/76252 DC

ISBN 0 580 20850 8

Amendments issued since publication

Amd. No.	Date	Comments

Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Introduction	1
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Apparatus	1
5 Concentration saturation procedure	1
6 Particle-size calibration procedure	2
7 Precautions	5
8 Identification statement	5
Table 1 — Example of particle count worksheet	3
Table 2 — Optical particle counts for 1 mg/l ACFTD	4
List of references	Inside back cover

National foreword

This Part of BS 5540 has been prepared under the direction of the Machinery and Components Standards Policy Committee and is identical with ISO 4402:1991 *Hydraulic fluid power — Calibration of automatic-count instruments for particles suspended in liquids — Method using classified AC Fine Test Dust contaminant*, published by the International Organization for Standardization (ISO). It is one of a series relating to the evaluation of particulate contamination in hydraulic fluids. This standard supersedes BS 5540-2:1978 which is withdrawn.

This Part of BS 5540 describes a method of calibrating liquid automatic-count instruments. The principle consists of using the instrument being calibrated to assess six or more known test suspensions containing different concentrations of AC Fine Test Dust contaminant.

Other Parts in the series are as follows.

- *Part 1: Qualifying and controlling of cleaning methods for sample containers;*
- *Part 3: Methods of bottling fluid samples;*
- *Part 4: Method of defining levels of contamination (solid contaminant code);*
- *Part 5: Method of reporting contamination analysis data;*
- *Part 6: Method of calibrating liquid automatic particle-count instruments (using mono-sized latex spheres);*
- *Part 7: Method of determining the level of contamination (by the gravimetric method);*
- *Part 8: Method of determining the level of contamination (by the counting method using a microscope).*

Cross-references

International standard	Corresponding British Standard
ISO 3722:1976	BS 5540 <i>Evaluating particulate contamination of hydraulic fluids</i> Part 1:1978 <i>Qualifying and controlling, of cleaning methods for sample containers</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 5598:1985 to which reference is made in the text and has decided that it is acceptable for use in conjunction with this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.