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Hydraulic fluid power — Filter elements — Determination of resistance to flow fatigue using high viscosity fluid

Transmissions hydrauliques — Éléments filtrants — Détermination de la résistance à la fatigue due au débit en utilisant un fluide à haute viscosité

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 23181 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 6, *Contamination control*.

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. The fluid is both a lubricant and a power-transmitting medium. Filters maintain fluid cleanliness by removing insoluble contaminants. The filter element is a porous device that performs the actual process of filtration.

The effectiveness of the filter element in controlling contaminants is dependent upon its design and its sensitivity to any unsteady operating conditions that can stress and cause damage to the filter element. The flow fatigue test procedure using high viscosity fluid specified in this International Standard can be used when the same element needs to be subjected to further testing, for example a multi-pass test, after the flow fatigue test has been applied in order to meet a purchaser's acceptance criteria. In addition, this International Standard can be used to simulate start-up conditions of mobile hydraulic equipment by using a high viscosity fluid to generate the required differential pressure. The attention of users of this International Standard is drawn to the fact that round robin testing has shown that flow fatigue resistance characteristics determined in accordance with this International Standard differ from characteristics determined in accordance with ISO 3724.