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Hydraulic fluid power — Fire-resistant (FR) fluids — Requirements and guidelines for use

Transmissions hydrauliques — Fluides difficilement inflammables — Exigences et principes directeurs pour leur utilisation

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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 7745 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 4, *Classifications and specifications*.

This second edition cancels and replaces the first edition (ISO 7745:1989), which has been technically revised.

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. The most widely used liquid for hydraulic power systems is mineral oil which has advantages of excellent lubricity, availability in a wide range of viscosities and reasonable cost.

While not readily ignited in bulk, mineral oil is nevertheless flammable, and the high pressures associated with hydraulic systems can lead to a release of fluid which is easily ignited. In circumstances where ignition is likely, such as in a steel mill, or where released fluid cannot be allowed to propagate a fire, as in a coal mine, an alternative, fire-resistant, fluid must be used. Fire-resistance and physical properties such as viscosity and lubricity vary widely among the several types of fluid available. It is important therefore to select a fire-resistant fluid to match its proposed application and the perceived hazards in use.