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Hydraulic fluid power — Test code for the determination of sound power levels using sound intensity techniques: Engineering method —

Part 1: Pumps

Transmissions hydrauliques — Code d'essai pour la détermination des niveaux de puissance acoustique à l'aide des techniques d'intensimétrie: Méthode d'expertise —

Partie 1: Pompes

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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 16902-1 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 8, *Product testing*.

ISO 16902 consists of the following parts, under the general title *Hydraulic fluid power — Test code for the determination of sound power levels using sound intensity techniques: Engineering method*:

— *Part 1: Pumps*

— *Part 2: Motors*[1)]

1) In preparation.

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure in a closed circuit. Pumps are components that convert rotary mechanical power into fluid power. During the process of converting mechanical power into fluid power, airborne noise, fluid-borne noise and structure-borne noise are radiated from the pump.

The airborne noise level of a hydraulic fluid power pump is an important consideration in component selection. ISO 4412-1 [1] describes a method of taking noise level measurements but requires a very specialized and costly test environment. The procedures described in this part of ISO 16902 do not require specialized and expensive test conditions but can be expected to achieve “engineering” or “survey” levels of accuracy. The results should be sufficiently accurate so that comparisons can be made between pumps. It should be noted that sound power is physically a function of the test environment, and may in some cases differ from the sound power of the same source determined under other conditions.