1. Record Nr. UNINA9910830989803321

Titolo	Positive displacement pumps [[electronic resource]] : a guide to performance evaluation / / prepared by the Equipment Testing Procedures Committee, AIChE, New York
Pubbl/distr/stampa	Hoboken, NJ, : John Wiley & Sons, c2007
ISBN	1-282-76458-6 9786612764585 0-470-92475-6 0-470-92474-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (94 p.)
Collana	AIChE equipment testing procedure
Disciplina	621.252
Soggetti	Pumping machinery - Evaluation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 73) and index.
Nota di contenuto	Positive Displacement Pumps: A Guide to Performance Evaluation; Table of Contents; 100.0 INTRODUCTION; 200.0 EXTENDED DEFINITIONS OF MAJOR TERMS, WITH EXPLANATIONS, CONVERSION FACTORS, AND NOMENCLATURE; 200.1 Positive Displacement Pump; 200.2 Fluid versus Liquid; 200.3 Flow; 200.4 Pressure; 200.5 Net Positive Inlet Pressure (NPIP); 200.6 Power; 200.7 Efficiency; 200.8 Torque; 200.9 Viscosity; 200.10 Specific Gravity; 200.11 Revolutions per Minute (rpms); 200.12 Extended Definitions; 300.0 TYPES OF PUMPS COVERED IN THIS PROCEDURE; 300.1 Gear Pumps; 300.2 Lobe Pumps; 300.3 Multiple Screw Pumps 300.4 Vane Pumps300.5 Progressive Cavity Pumps; 300.6 Diaphragm Pumps; 300.7 Piston/Plunger Pumps; 400.0 GENERAL NOTES ON TEST PREPARATION LOGISTICS-INSTRUMENTS AND METHODS OF MEASUREMENT; 400.1 Flow; 400.2 Pressure; 400.3 Power and Efficiency; 400.4 Temperature; 500.0 TESTING ROTARY PUMPS (GEAR, MULTIPLE SCREW, LOBE, AND VANE PUMPS); 501.0 Test Equipment; 501.1 Shaft Speed; 501.2 Suction and Discharge Pressures; 501.3 Fluid Viscosity at Range of Temperatures; 501.4 Flow Rate; 501.5 Input Power; 502.0 Standardized Tests; 502.1 Performance Test; 502.2 Minimum Required Suction Pressure Test

503.0 Other Tests503.1 Sound Pressure Level; 503.2 Vibrations and Temperature; 504.0 Test Process Example; 504.1 Performance Test; 504.2 Observations; 504.3 Minimum Required Suction Pressure Test; 504.4 Observations; 504.5 Other Tests; 600.0 PROGRESSIVE CAVITY PUMP TESTING; 601.0 Test Equipment; 601.1 Shaft Speed; 601.2 Pressure Instrumentation; 601.3 Fluid Viscosity; 601.4 Flow Measurement; 601.5 Input Power; 602.0 Tests; 602.1 Performance Tests; 602.2 NPSH Test; 603.0 Other Tests; 603.1 Sound Pressure Level; 603.2 Vibration Measurements; 603.3 Temperature Measurements; 603.4 Miscellaneous
700.0 AIR-OPERATED DIAPHRAGM PUMPS700.1 Recommended Installation; 700.2 Access; 700.3 Air Supply; 700.4 Elevation; 700.5 Flexible Connections; 701.0 Test Equipment; 701.1 Inlet Air Pressure; 701.2 Fluid Discharge Pressure; 701.3 Fluid Inlet Pressure; 701.4 Process Fluid Temperature; 701.5 Environment and Inlet Air Temperature (°F, °C); 701.6 Viscosity; 701.7 Specific Gravity; 701.8 Ambient and Inlet Air Relative Humidity; 701.9 Air Consumption; 701.10 Flow; 701.11 Sound; 701.12 Blow-by; 702.0 Tests; 702.1 Performance Test; 702.2 Life Test; 703.0 Other Tests; 703.1 Blow-by; 703.2 Dry Vacuum
703.3 Wet Vacuum703.4 Sound Test; 704.0 Field Test Process Example; 704.1 Performance Test; 704.2 Observation; 800.0 RECIPROCATING POSITIVE DISPLACEMENT PUMP (RPDP) TESTING; 800.1 Safety Precautions; 800.2 Piping; 800.3 Test Objective; 801.0 Test Equipment; 801.1 Shaft Speed; 801.2 Suction Pressure; 801.3 Discharge Pressure; 801.4 Differential Pressure; 801.5 Crankcase Temperature; 801.6 Liquid Temperature; 801.7 Vapor Pressure; 801.8 Viscosity; 801.9 Flow Rate; 801.10 Input Power; 802.0 Standardized Tests; 802.1 Performance Test; 802.2 Inlet Pressure Trace; 803.0 Other Tests 803.1 Sound Pressure Level

Sommario/riassunto

Positive Displacement Pumps is a current reference guide for positive displacement pumps for both traditional and state-of-the-art testing methods, and serves as a bridge between textbooks and manufacturer's literature by providing equipment testing practices based on technical know-how, practical experience, and academic theory. With its simple, practical focus, this book not only is a resource guide to any engineer's task, but also adds important information to the overall literature of pump fundamentals and operating reliability: Written for field users, and terminology conci