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Record Nr.	UNISA996205413603316
Titolo	AIChE equipment testing procedure [[electronic resource]] : mixing equipment (impeller type) / / prepared by the Equipment Testing Procedures Committee of the American Institute of Chemical Engineers
Pubbl/distr/stampa	New York, N.Y., : American Institute of Chemical Engineers, 2001
ISBN	1-282-78338-6
	9786612783388
	0-470-93555-3
	0-470-93554-5
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (148 p.)
Collana	AIChE equipment testing procedure
Disciplina	660.283
Soggetti	Mixing machinery - Testing
	Chemistry, Technical - Equipment and supplies - Evaluation
	Impellers - Testing
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 and index.
Nota di contenuto	AIChE Equipment Testing Procedure: Mixing Equipment (Impeller Type); Contents; Figures; 100.0 Purpose and scope; 101.0 Purpose; 102.0 Scope; 103.0 Liability; 200.0 Definition and Description of Terms; 201.0 Introduction; 202.0 Mixing Equipment; 202.1 Equipment Configurations; 202.2 Impellers; 202.3 Vessels; 202.4 Auxiliary Equipment; 203.0 Basic Nomenclature; 203.1 Equipment Variables; 203.2 Mixing Related Dimensionless Groups; 203.3 Process Related Dimensionless Groups; 204.0 Operating Conditions; 205.0 Types of Tests; 205.1 Operating Performance; 205.2 Mechanical Conditions 205.3 Mechanical Operation205.4 Mixer Support Structure; 205.5 Process Conditions; 206.0 Performance Criteria; 300.0 Test Planning; 301.0 Preliminary Considerations; 301.1 Safety; 301.2 Environmental; 301.3 Test Objectives; 301.4 Multiple Applications; 302.0 Plans for Operating Performance Tests; 302.1 Speed; 302.2 Power; 302.3 Torque; 303.0 Plans for Mechanical Condition Tests; 303.1 Equipment Verification; 303.2 Alignment; 303.3 Runout; 303.4 Gear Tooth Contact; 303.5 Seals; 303.6 Auxiliary Equipment; 303.7 Vibration;

303.8 Noise; 304.0 Plans for Mechanical Operation Tests

305.0 Plans for Process Condition Tests305.1 Miscible Liquid Blending; 305.2 Heat Transfer; 305.3 Immiscible Liquid Dispersion; 305.4 Solids Suspension in Liquid; 305.5 Gas-Liquid Dispersion; 305.6 Variable Conditions; 305.7 Other Measurable Results; 306.0 Performance Criteria; 400.0 Measurement Methods & Instruments; 401.0 Introduction; 402.0 Operating Performance Measurements; 402.1 Speed; 402.2 Power; 402.3 Torque; 403.0 Mechanical Condition Measurements; 403.1 Alignment and Adjustment; 403.2 Runout; 403.3 Gear Tooth Contact Pattern; 403.4 Seals; 403.5 Auxiliary Equipment; 403.6 Vibration

403.7 Noise403.8 Temperature; 404.0 Mechanical Operation Measurements; 404.1 Natural Frequency; 404.2 Shaft strain; 404.3 Deflection; 404.4 Spectral Analysis; 405.0 Process Condition Measurements; 405.1 Density or Specific Gravity; 405.2 Viscosity; 405.3 Physical State; 405.4 Chemical Composition; 405.5 Other Physical/Chemical Properties; 406.0 System Operating Conditions; 406.1 Temperature; 406.2 Pressure; 406.3 Liquid Level, Volume, and Flow; 406.4 Phase Ratios; 406.5 Blend Time; 406.6 Sampling; 500.0 Test Procedures; 501.0 General Test Procedures; 502.0 Preliminary Operation and Safety

502.1 Instruction Manuals502.2 Check for Debris in Vessel; 502.3 Check for Obstructions; 502.4 Pre-Operational Check; 502.5 Hand Turning; 502.6 Jog; 502.7 Hydrostatic Pressure Tests; 502.8 System Test in Air; 502.9 System Water Test; 503.0 Operating Performance Tests; 503.1 Speed; 503.2 Power; 503.3 Torque; 504.0 Mechanical Condition Tests; 504.1 Alignment and Adjustments; 504.2 Runout; 504.3 Gear Tooth Contact Patterns; 504.4 Seals; 504.5 Auxiliary Equipment; 504.6 Vibration; 504.7 Noise; 504.8 Temperature; 505.0 Mechanical Operation Tests; 505.1 Natural Frequency

505.2 Deflections of Structure

| Sommario/riassunto | The latest edition of this industry-friendly guide to evaluating the performance of mixing equipment brings this traditional process operation into the 21st century. The book starts with basic definitions and terms, and goes to detail test planning and procedures, and computation and evaluation of results. Appendices offer a troubleshooting checklists, sample log. |