

DIN 28430:2017-06 (E)

Vacuum technology - Rules for the measurement of steam jet vacuum pumps and steam jet compressors - Motive fluid: steam

| Contents | | Page |
|---------------------------|--|-------------|
| Foreword | | 3 |
| 1 | Scope | 4 |
| 2 | Normative references | 4 |
| 3 | Terms and definitions | 4 |
| 4 | Symbols and abbreviations | 6 |
| 5 | Specified performance data | 7 |
| 6 | Principles of measurement and calculation | 7 |
| 6.1 | Equivalent suction flows of single-stage and multi-stage steam jet vacuum pumps without intercondensers | 7 |
| 6.2 | Suction flows for multi-stage steam jet vacuum pumps with intercondensers | 8 |
| 6.3 | Determination of mass flow rates | 9 |
| 6.3.1 | General | 9 |
| 6.3.2 | Determination of the suction flow rate | 10 |
| 6.3.3 | Determination of the motive steam flow rate | 13 |
| 6.3.4 | Suction temperature | 14 |
| 6.3.5 | Motive steam temperature | 14 |
| 6.4 | Measurement uncertainties | 14 |
| 7 | Carrying out and evaluating the tests | 14 |
| 7.1 | Preparation | 14 |
| 7.2 | Conditions during measurement | 15 |
| 7.2.1 | Carrying out the measurements | 15 |
| 7.2.2 | Suction flow rate | 15 |
| 7.2.3 | Suction pressure | 15 |
| 7.2.4 | Limiting back pressure | 15 |
| 7.3 | Evaluation of measurements | 15 |
| 7.4 | Testing under conditions deviating from the design values | 16 |
| 7.4.1 | General | 16 |
| 7.4.2 | Absence of sufficiently superheated motive steam | 16 |
| 7.4.3 | Absence of sufficient mass flow rates or motive steam pressures | 16 |
| 7.4.4 | Absence of sufficiently high back pressure | 17 |
| Bibliography | | 18 |