

# DIN 28430:2017-06 (E)

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

---

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