

# ISO/TR 16224:2012-04 (E)

## Technical aspects of nut design

---

<b>Contents</b>		<b>Page</b>
	<b>Foreword</b> .....	<b>iv</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Symbols</b> .....	<b>1</b>
<b>4</b>	<b>Design principle</b> .....	<b>3</b>
<b>4.1</b>	<b>Possible fracture modes in bolt and nut assemblies subjected to tensile load</b> .....	<b>3</b>
<b>4.2</b>	<b>Calculation of the fracture loads in bolt and nut assemblies</b> .....	<b>3</b>
<b>4.3</b>	<b>Influencing factors on the loadability of bolt and nut assemblies</b> .....	<b>6</b>
<b>5</b>	<b>Calculation methods of bolt and nut assemblies in accordance with Alexander's theory</b> ....	<b>8</b>
<b>5.1</b>	<b>General</b> .....	<b>8</b>
<b>5.2</b>	<b>Minimum nut height for nuts with specific hardness range</b> .....	<b>9</b>
<b>5.3</b>	<b>Minimum hardness for nuts with specific nut height</b> .....	<b>10</b>
<b>5.4</b>	<b>Proof load</b> .....	<b>11</b>
<b>6</b>	<b>Comparison among specified values in ISO 898-2 and calculated results</b> .....	<b>11</b>
<b>6.1</b>	<b>General considerations for obtaining the specified values</b> .....	<b>11</b>
<b>6.2</b>	<b>Calculation of the minimum Vickers hardness (HV) and the stress under proof load (Sp) for individual nuts of style 1 and style 2</b> .....	<b>11</b>
<b>6.3</b>	<b>Consequences for ISO nut design</b> .....	<b>14</b>
	<b>Bibliography</b> .....	<b>15</b>