DRAFT EAST AFRICAN STANDARD

Machete — Specification

EAST AFRICAN COMMUNITY
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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 042, Production and General Engineering.

This second edition cancels and replaces the first edition (………), which has been technically revised.

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Machete — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for machete. It applies to general purposes curved blade and straight blade machete.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 9556, *Steel and iron — Determination of total carbon content — Infrared absorption method after combustion in an induction furnace*

ISO 10700, *Steel and iron — Determination of manganese content — Flame atomic absorption spectrometric method*

ISO 439, *Steel and iron — Determination of total silicon content — Gravimetric method*

ISO 10714, *Steel and iron — Determination of phosphorus content — Phosphovanadomolybdate spectrophotometric method*

ISO 671, *Steel and cast iron — Determination of sulphur content — Combustion titrimetric method*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at [http://www.iso.org/obp](http://www.iso.org/obp)

4 Types

4.1 The machete may either be of:

a) straight blade as shown in Figure 1; or

b) Curved blade as shown in Figure 2.
Figure 1 — Straight blade machete
Figure 2 — Curved blade machete

NOTE – Different shapes other than those given in clause 4.1 may be allowed depending on the purpose for which the machete is made provided that it meets the material requirements in clause 5 and passes the tests.
5 Requirements

5.1 Dimensions

The blade dimensions shall be as specified in table 1 and 2 and shall have a minimum thickness of 2 mm.

Table 1 — Dimensions for the straight blade machete — Tolerances ± 5 % unless otherwise

<table>
<thead>
<tr>
<th>Nominal blade length</th>
<th>B ± 5</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>t (min)</th>
<th>H ± 0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>411</td>
<td>152</td>
<td>75</td>
<td>26</td>
<td>48</td>
<td>50</td>
<td>2.0</td>
<td>95</td>
</tr>
<tr>
<td>462</td>
<td>152</td>
<td>75</td>
<td>26</td>
<td>48</td>
<td>50</td>
<td>2.0</td>
<td>95</td>
</tr>
</tbody>
</table>

Table 2 — Form dimensions for curved blade machete

<table>
<thead>
<tr>
<th>Nominal blade length</th>
<th>B ± 5</th>
<th>C ± 4</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>t (min.)</th>
<th>H ± 3</th>
<th>G ± 0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>305</td>
<td>152</td>
<td>126</td>
<td>26</td>
<td>48</td>
<td>50</td>
<td>2.0</td>
<td>85</td>
<td>3</td>
</tr>
<tr>
<td>400</td>
<td>152</td>
<td>126</td>
<td>26</td>
<td>48</td>
<td>50</td>
<td>2.0</td>
<td>85</td>
<td>3</td>
</tr>
<tr>
<td>457</td>
<td>152</td>
<td>126</td>
<td>26</td>
<td>48</td>
<td>50</td>
<td>2.0</td>
<td>85</td>
<td>3</td>
</tr>
</tbody>
</table>

5.1.1 The type of machete and dimensions shall be as specified in Tables 1 and 2 of this standard.

5.2 Materials

5.2.1 Blades

Blades shall be made from suitable carbon steel of chemical composition as given in Table 3.

Table 3 — Chemical composition

<table>
<thead>
<tr>
<th>Chemical, %</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>0.5</td>
<td>0.8</td>
<td>ISO 9556</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.60</td>
<td>1.5</td>
<td>ISO 10700</td>
</tr>
<tr>
<td>Silicon</td>
<td>0.15</td>
<td>0.35</td>
<td>ISO 439</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>-</td>
<td>0.05</td>
<td>ISO 10714</td>
</tr>
<tr>
<td>Sulphur</td>
<td>-</td>
<td>0.05</td>
<td>ISO 671</td>
</tr>
</tbody>
</table>

5.2.2 Handles

For purposes of this standard, machete shall be considered complete only when fitted with handles.
Handles shall be made from hard wood of specific gravity ranging from 0.66 to 0.8 well seasoned to not more than 20 % moisture content (dry basis). Other comparable materials may be used provided that they are free from any defects rendering the handle unreliable or harmful to the user.

Where rivets are used, they shall be made of steel. The rivets shall be staggered as given in Figure 2 and 3, dimensions E and G.

Any other suitable method of fastening may be used provided it fits the purpose.

5.3 Hardness

The machete shall be given suitable heat treatment to give hardness reading 38 HRC to 46 HRC. Testing shall be done in accordance with ISO 6508-1, Method for Rockwell hardness test.

6 Tests

6.1 Tensile test

Machetes shall undergo a tensile test that shall be done in accordance with ISO 6892-1.

6.2 Bend Test

The machete shall be held down as shown in Figure 4 and bent forward and backward through one cycle and it shall not show permanent deformation, rupture or any sign of failure.

The machete shall be bent 50 times through 45º angle on both sides before it develops any cracks.

All dimensions in Millimetres

Figure 4 — Bend test
7 Sampling

7.1 Lot

7.1.1 If the entire stock is of homogenous quality then in effect, the stock shall comprise a single lot. A sample of specified size may then be selected directly upon opening the stock.

7.1.2 If the lot is composed of boxes (for instance, each from a different manufacturer) then sampling shall be conducted in two stages. First select a sample number of boxes and then select a sample of hoes from within each selected box.

7.1.3 Once the samples have been selected, they shall be legibly marked (for example 1, 2, 3, etc.) and the box from which they were taken also marked so that each can be sourced back to the box from which it was taken.

7.2 Sample size

A zero-based acceptance sample shall be selected based on an Acceptable Quality Level of 2.5 %. The sample sizes to be selected are as given in Table 4.

<table>
<thead>
<tr>
<th>Lot size</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 90</td>
<td>7</td>
</tr>
<tr>
<td>91 to 150</td>
<td>11</td>
</tr>
<tr>
<td>151 to 280</td>
<td>13</td>
</tr>
<tr>
<td>281 to 500</td>
<td>16</td>
</tr>
<tr>
<td>501 to 1 200</td>
<td>19</td>
</tr>
<tr>
<td>1 201 to 3 200</td>
<td>23</td>
</tr>
<tr>
<td>3 201 to 10 000</td>
<td>29</td>
</tr>
<tr>
<td>10 001 to 35 000</td>
<td>35</td>
</tr>
<tr>
<td>35 001 and above</td>
<td>40</td>
</tr>
</tbody>
</table>

8 Marking and Packaging

8.1 Marking

The machete shall be legibly and indelibly marked with the following;

a) the manufacturer’s name or trade mark, this should be as near the handle as possible;

b) nominal blade length (in mm); and

c) country of origin;

8.2 Packaging

8.2.1 Each packaging material shall have the following information legibly marked on it;

a) manufacturers name and/or trade mark;
b) batch or code number;

c) nominal blade length (in mm);

d) application of the machete; and

e) country of origin.

8.2.2 The machete shall be suitably protected from corrosion during storage.