

DRAFT UGANDA STANDARD

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Machetes — Specification

DRAFT UGANDA STANDARD FOR PUBLIC REVIEW



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
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The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 4, Mechanical Engineering and Metallurgy.

This second edition cancels and replaces the first edition (US 162:2000), which has been technically revised.

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Machetes — Specifications

1 Scope

This Working Draft Uganda Standard prescribes requirements, necessary dimensions, workmanship and test methods and sampling criteria of straight blade, curved blade, and double edged blade machetes (panga).

2 Normative references

The following referenced documents 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.

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

DUS ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 size

length of the cutting blade excluding the handle

3.2 machete

broad blade used for cutting vegetation

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>

4 Type

4.1 The machete may either be of:

- a) straight blade



Figure 1 — Straight blade machete

b) curved blade, or



Figure 2 — Curved blade machete

c) double edge blade type

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Figure 3 — Double edge blade machete

4.2 Different shapes other than those given in 4.1 may exist depending on the purpose for which the machete is made provided that it meets the requirements in clause 5 and passes the tests in clause 7.

5 Requirements

5.1 Blade

The blade shall be made or manufactured from steel with the chemical composition as shown Table 1 below.

Table 1 — Chemical composition of the blade

Constituent	Minimum %	Maximum %
Carbon	0.50	0.80
Manganese	0.60	1.5
Silicon	0.15	0.35
Sulphur	-	0.06
Phosphorous	-	0.06

5.2 Handles

5.2.1 The handle shall be made of a material that facilitates complete bonding with the blade and firm grip of the user. If it is made of wood, it shall be hardwood with a specific gravity of 0.66 to 0.80 after seasoning to not more than 20 % moisture content.

5.2.2 All handles shall be shaped or profiled to match the human hand.

5.3 Jointing

The blade and the handle shall be firmly jointed and the joint shall not have any harmful protrusions such as burrs and sharp edges. Where rivets are used, they shall be countersunk into the handle and metal edges recessed into the handle.

5.4 Mechanical properties of the blade

5.4.1 The ultimate strength shall not be less than 1200 MPa (1.2x 10⁹ N/m²) as tested in accordance with 8.1

5.4.2 The machete shall be heat treated to hardness of 45 to 50 HRC to impart wear resistance and impact toughness as tested in accordance with 8.2.

5.5 Purpose

The manufacturer shall declare the purpose for which the machete is intended.

5.5 Workmanship and finish

5.5.1 The machete shall be free from cracks, flaws and other defects.

5.5.2 All burrs, flashes and sharp edges shall be removed except the cutting edge.

5.5.3 A coating of protective paint or grease shall be applied.

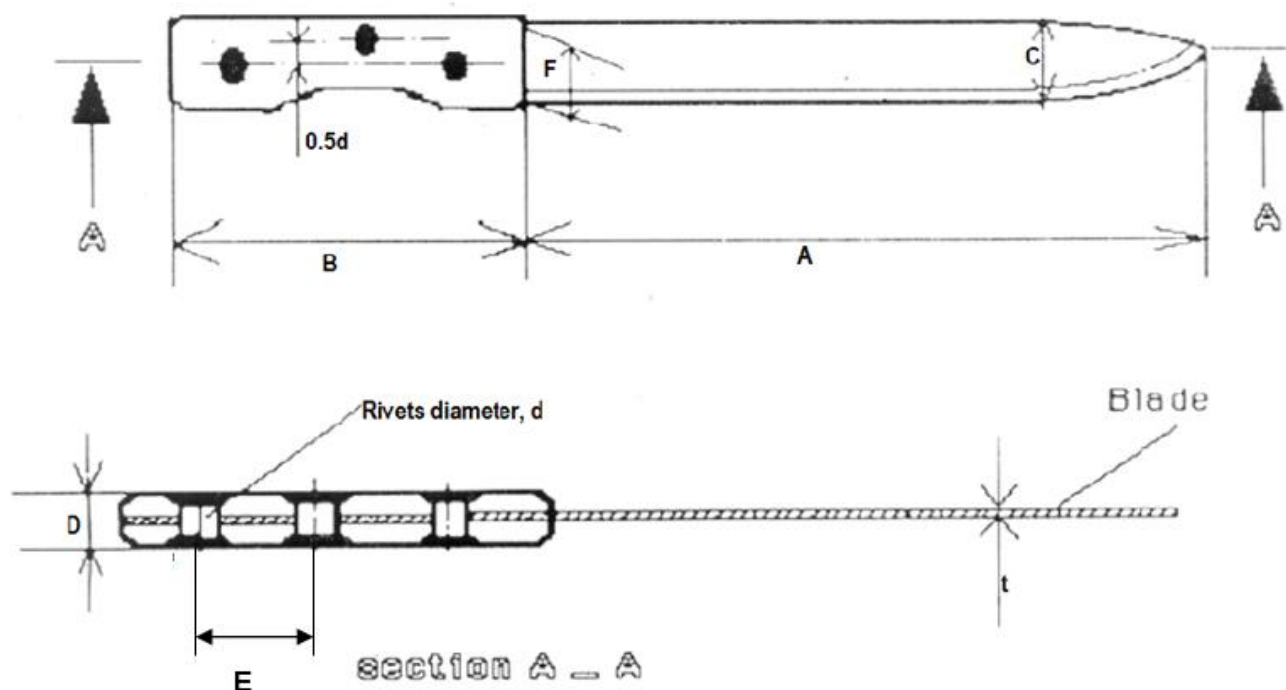
5.5.4 Unless agreed to between purchaser and supplier the cutting edge shall be sharpened to 30° to 50° angle

6 Dimensions

6.1 The necessary dimensions shall be according to Table 2. Different dimensions

Table 2 — Dimensions and tolerances

Parameter	Minimum nominal dimension of each type of machete mm			Tolerance
	Curved blade	Straight blade	Double edged blade	
A	190	400	550	±5%
	388			
	445			
B	145	145	145	±8
C	122	20	20	±2
D	20	20	20	±1
E	45	45	45	±2
F	48	20	20	±0.5
G	2.5	2.5	2.5	±0.2
H	80	-	-	±5
t	2.0			



NOTE These dimensions apply for a double edged blade machete

Figure 4 — Straight machete showing dimensions

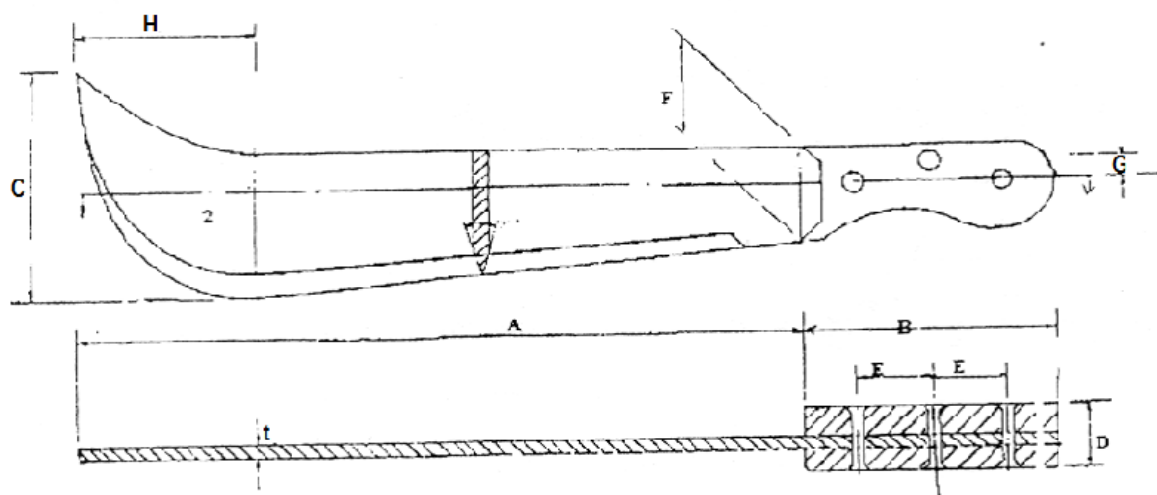


Figure 5 — Curved machete showing dimensions

6.2 Different dimensions other than those given in 6.1 may be allowed depending on the purpose for which the machete is made provided that it meets the requirements in clause 5 and passes the tests in clause 7

7 Tests

7.1 Tensile test

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

7.2 Hardness test

The hardness shall be tested in accordance with, DUS ISO 6508-1 (B and C scales).

7.3 Bend test

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

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

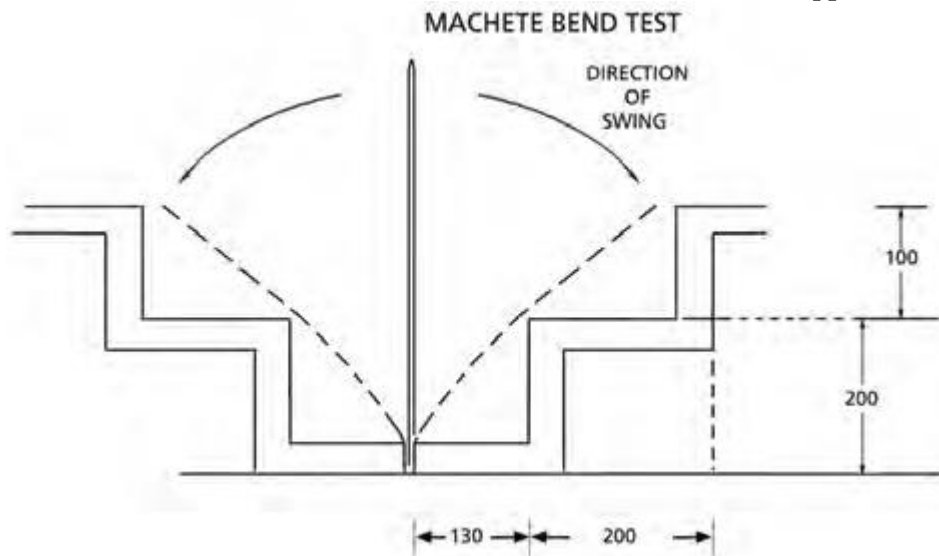


Figure 6 — Bend test (dimensions in millimetres)

8 Sampling

8.1 Lot

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

8.1.2 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 machetes from within each selected box.

8.1.3 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.

8.2 Sample size

A Zero-based Acceptance Sample shall be selected based on an Acceptable Quality Value of 2.5 %. The sample sizes to be selected are as indicated in Table 6

Table 2 — Acceptable Quality Level (AQL) of 2.5%

Lot size	Sample size
Less than 90	7
91 to 150	11
151 to 280	13
281 to 500	16
501 to 1 200	19
1 201 to 3 200	23
3 201 to 10 000	29
10 001 to 35 000	35
35 001 and above	40

9 Marking

9.1 Each machete shall be marked with the following particulars:

- a) manufacturers name and/or trade mark;
- b) batch or code number; and
- c) size of machete.

9.2 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) size of machete purpose of the machete; and
- d) country of origin

**Annex A
(informative)**

some of the shapes of machete

A.1 Machete type M208General



A.2 Machete type M206



A.3 Machete type M212



A.4 Machete type M204



Bibliography

- [1] Agricultural hand tools in emergencies — Guidelines for technical and field officers
- [2] US 162:2000 Specification for machetes (panga)

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