



DRAFT TANZANIA STANDARD

**MEDC 10(5517) P3 - Farm Implements - Shovels Specifications (Rev TZS
435:1992)**

FOR STAKEHOLDERS COMMENTS ONLY

Farm implements - Shovels - Specification

0 Foreword

The main objective of this Tanzania Standard is to give material characteristics of a shovel

This standard Tanzania standard was prepared in response to a request from the manufacturers of shovels so as to promote export trade.

The Tanzania Standard is related to the manufacturing processed prevailing in the country.

For the purpose of deciding whether a particular requirement of this Tanzania Standard is complied with the final value observed or calculated expressing the result of a test made or analysis shall be rounded off in accordance TZS 4: 1979, (see clause 2) .

The number of significant places retained in the rounded off value should be the same as that of the specified value in this Tanzania Standard

1 Scope

This Tanzania Standard gives the material and other requirements of a shovel.

2 References

For the purposed of this Tanzania Standard the following references shall apply:

- a) TZS 4: 1979 – Rounding off numerical values
- b) TZS 10:1979 – General requirements for the supply of metallurgical materials
- c) TZS 14: 1979 plain carbon – Determination of the sulphur content by combustion method
- d) TZS 15: 1979 – Steel - Determination of phosphorus by alkali metric method,
- e) TZS 241: 1984 - Steel – Rockwell hardness test (B and C scales),
- f) TZS 244: 1984 - Farm implements – method of sampling.

3 Definitions

Definitions of shovel, grip and size

grip - Refers to the part shown in figure 2

shovel – As shown in figure 1, which includes the blade, socket, handle and grip. The design shall not necessarily be the same.

size – Degree of smallness or largeness.

4 Materials

Material used for manufacture of the blade and socket shall be steel with chemical composition as specified in the table, or any other type of steel which can give the required physical properties of the shovel

Table 1 - Chemical composition of steel for manufacture of blade and socket

Element	Composition, %by wt.	
	Minimum	Maximum
Carbon	0.42	0.49
Manganese	0.50	0.80
Phosphorus		0.050
Sulphur		0.050

Material of the handle may be of wood or plastic.

5 Hardness

The blade when tested dup to 45% of its height measured from the cutting edge and in accordance with TZS 241: 1984 (see clause 2) shall have a hardness of 39 – 48 HRC or its equivalent.

6 Requirements

6.1 Grip and handle shall not rotate in use.

The grip and the handle should be smooth; free from cracks, sharp edges,

6.2 The handle shall be tested for strength by clamping it and subjecting the same to a bending moment of equivalent to 50 kgf at a radius of 750mm for an hour without breading or showing a permanent deformation (see figure 3).

6.3 Dimension of shovel shall be in accordance to agreement between purchaser and manufacturer.

7 Workmanship and finish

7.1 The blade and socket shall be free from pits, cracks, flaws, burrs and other visual defects.

7.2 A coating of protective paint or grease on the working part of the blade shall be provided. The top part not in direct contact with the soil shall have an anti- corrosion paint coating.

8 Marking and packing

The shovel shall be marked with manufacturers name or registered trade mark. It may also be marked with TBS Certification Mark, batch and code number.

Note – The TBS Certification mark may be used by manufactures only under licence from TBS. Particulars of conditions under which the licence may be granted may be obtained from TBS.

The shovel shall be packed according to agreements between purchasers and manufacturers.

Round mouth open socket shovel

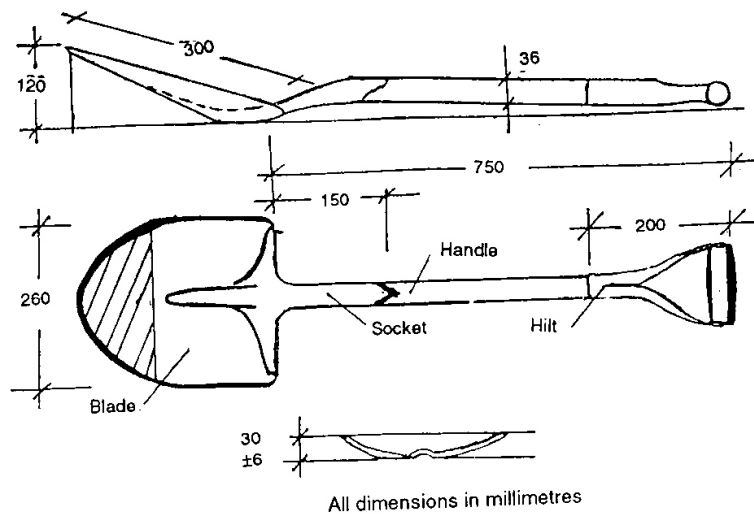
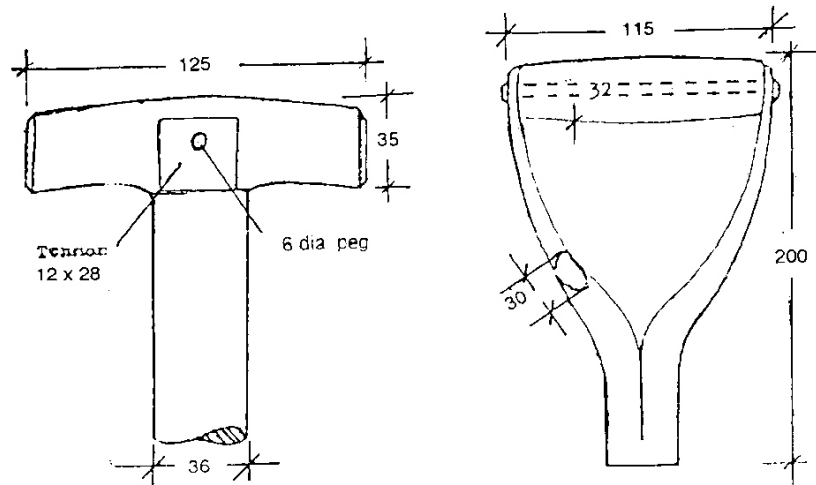
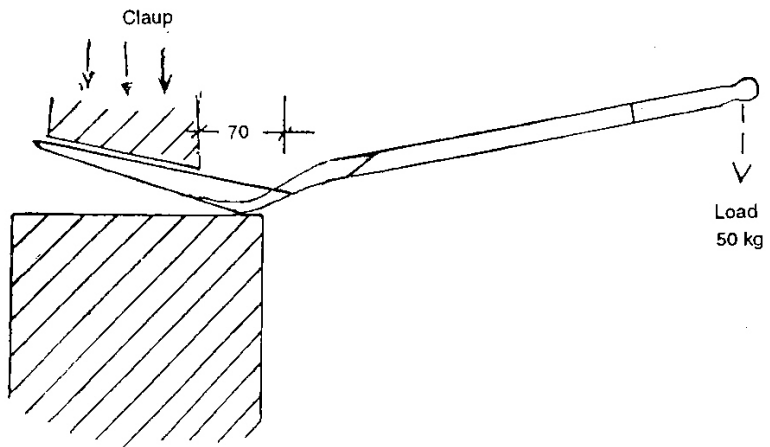


Figure 1



All dimensions in millimeters

Figure 2



All dimensions in millimeters

Figure 3