



AE(T)

ANKITA MODEL : PRADHAN TWO BOTTOM MECHANICALLY REVERSIBLE M. B. PLOUGH
(Tractor Mounted)



सत्यमेव जयते

भारत सरकार

GOVERNMENT OF INDIA

कृषि मन्त्रालय

MINISTRY OF AGRICULTURE

(कृषि एवं सहकारिता विभाग)

(DEPARTMENT OF AGRICULTURE AND CO-OPERATION)

उत्तर पूर्वी क्षेत्र कृषि यन्त्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE

विश्वनाथ चारिआलि, शोणितपुर, असम

BISWANATH CHARIALI:: SONITPUR:: ASSAM - 784 176

Web site: <http://dacnet.nic.in/nerfmtti>

E-mail : fmti-ner@nic.in

Telephone: 03715-222094

Fax: 03715-222374

1 SCOPE OF TEST

The scope of test was to check and assess the following:

- 1.1 Laboratory test
 - Checking of specifications
 - Hardness of soil engaging components
 - Wear analysis of critical components
 - Chemical analysis of critical components
- 1.2. Field test
 - Quality of work
 - Rate of work
 - Labour requirement
 - Power requirement
 - Ease of operation and adjustments
 - Breakdowns and repairs

2 METHOD OF SELECTION

The Implement was directly submitted by the applicant for test at this Institute, therefore the method of selection is not known.

3 TEST PROCEDURE

1. IS: 6288 – 1971 -Test Code for Mould Board Ploughs (reaffirmed in 2009)
2. IS: 10691-1983 -Specification for Share For tractor- operated Mould board Ploughs (reaffirmed in 2006)
3. IS: 4468-1997 (Pt-1) - -Specification of Three-Point Linkage. (reaffirmed in 2007)

4 SPECIFICATIONS

- 4.1 GENERAL
- | | |
|-----------------------------|---|
| Name of implement | : Ankita, Two Bottom, Mechanically Reversible, Mould Board Plough |
| Manufacturer | : M/S ANKITA AGRO ENGINEERING K-37, M.I.D.C., WALUJ AURANGABAD, MAHARASTRA 431 136 |
| Type of implement | : Mounted Reversible type implement |
| Make | : Ankita |
| Model | : Pradhan |
| Year of manufacture | : 2009 |
| Serial No | : 00214 |
| No. of plough bottom(s) | : Two |
| Size of plough (mm) | : 2 x 370 |
| Recommended source of power | : 35 hp tractor and above |

| | | |
|-------------|--|----|
| Imp. 71/111 | ANKITA MODEL : PRADHAN TWO BOTTOM MECHANICALLY REVERSIBLE M. B. PLOUGH (Tractor Mounted) - [ICT] | 15 |
|-------------|--|----|



8.1.5 Ease of Operation and Adjustments

- a) The implement can be leveled by adjusting the top link easily from the operator's seat.
- b) The width of cut cannot be adjusted through the cross shaft as there is no provision for tilting its cranks.
- c) The implement cut, throw and invert the furrow slice completely & leaves clean furrow without disturbing the natural topography of the land. The overall field performance of the plough was found satisfactory.
- d) The share bar is hardened and tempered, which reduce rate of wear

9 DEFECTS, BREAKDOWNS AND REPAIRS

No breakdowns were occurred during 51.30 hrs of operation during testing period

10. COMMENTS AND RECOMMENDATIONS

- 10.1 The specifications of plough share does not conform fully to the requirements of IS: 10691- 1983. The share should be modified to meet all the requirements of the relevant Indian Standard.
- 10.2 The specification of implement hitch pyramid does not conform fully to the IS: 4468 (Pt-1)-1997. It is recommended that the same should be modified for conforming to the relevant Indian Standard.
- 10.3 All the components of the plough bottoms, except share bar are bolted as well as welded to the frog. The components such as share, landside, heel of landside etc., are soil engaging and fast wearing components. It is therefore, recommended that, the above components should be tightened with sunk headed/plough bolts and should not be welded for their easy replacement. This should be looked into.
- 10.4 Chemical compositions of plough share do not conform to Indian Standard. Hence such component having chemical composition as per Indian Standard should be used during manufacturing of implement
- 10.5 To hold the reversing handle with better gripping during turning of plough suitable handle grip may be provided.
- 10.6 The size of prime mover (tractor) as used for test was found adequate. No over loading of prime mover engine was noticed during the entire test.
- 10.7 The upper hitch pin was not supplied by the applicant/manufacturer during testing; hence, it is recommended that it should be provided with implement.


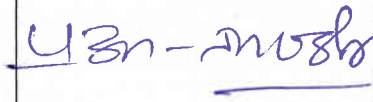



| | | |
|-------------|--|----|
| Imp. 71/111 | ANKITA MODEL : PRADHAN TWO BOTTOM MECHANICALLY REVERSIBLE M. B. PLOUGH (Tractor Mounted) - [ICT] | 16 |
|-------------|--|----|

11. PRINTED LITERATURE

No literature was supplied with the implement during testing. Hence, operator's manual, service manual and spare parts catalogue should be provided containing performance characteristics, special features, drawing and dimensions of the implement in English, Hindi and other regional languages for operator's use as per IS: 8132-1999. Separate literatures according to model should be provided with safety note, warnings, accessories and attachments, maintenance instruction and instruction for storage, handling transport, installation, etc. The cover should be of reasonable durability and should be of an appropriate size to protect the internal pages and the binding should be appropriate and durable for the intended usage.

TESTING AUTHORITY:

| | |
|--|---|
| PRADIP MESHAM ASSISTANT ENGINEER (TESING) |  |
| P.K.PANDEY SENIOR TEST ENGINEER |  |
| M.K. VISHWAKARMA DIRECTOR |  |

12. APPLICANT'S COMMENTS

The copy of the draft test report was made available to applicant, but no comments received from the applicant.