व्यावसायिक परीक्षण रिपोर्ट COMMERCIAL TEST REPORT

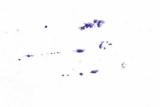


संख्या / No.: Machine-26/256

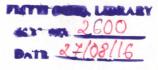
माह / Month: August, 2016



"NBSU, NBCC06" CHAFF CUTTER (Manually Operated)







भारत सरकार

GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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1. SCOPE OF TEST

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

LABORATORY TEST 1.1

- Checking of specification 1.1.1
- Conformity to requirements against the relevant Indian Standards 1.1.2

FIELD TEST 1.2

Performance test to find out:

- Quantity of work (a)
- Quality of work (b)
- Labour requirement (c)
- Ease of operation, adjustment & safety provisions (d)
- Wear of critical components (e)

2. METHOD OF SELECTION

The machine was directly submitted by the applicant for test at this institute. Hence method of selection was not known.

3. TEST CODE AND PROCEDURE

The following codes were referred for testing of Manually Operated Chaff Cutter Chaff

IS:7898-2001

: Manually-Operated

Cutter

(Reaffirmed Feb., 2012)

Specification

IS: 1511- 1979 ii)

(Reaffirmed Feb., 2012)

: Specification for blades for Manually Operated

Chaff-Cutter

4. SPECIFICATIONS

General: 4.1

Name and address of the

: M/S New Bihar Sellar Udyog

manufacturer

Vill. Shitalpur, Post - Jokiyari - 845 305,

P.S. Raxaul, Distt- East Champaran (Bihar)

Name & Address of Applicant/Importer

Mr. Saroj Prasad

M/S New Bihar Sellar Udyog

Vill. Shitalpur, Post - Jokiyari - 845 305, P.S. Raxaul, Distt- East Champaran (Bihar)

Make

: NBSU

Model

: NBCC06

Type

: Flywheel type, let-fall, chute fed, Manually

operated type

Year of manufacture

: N.A.

SI. No.

053

Country of origin

India

Suitability

Straw cutting (apa)

9. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

Performance of the chaff cutter: 9.1

Quantity of Cut: 9.1.1

- The feed rate was observed as 186 to 214kg/h.
- (b) The quantity of cut fodder received was measured as 176 to 198 kg/h.

9.1.2

- (a) The average length of cut was recorded as 15.51 to 18.47 mm. Quality of cut:
- (b) The variation from the theoretical length of cut was recorded as-27.19 to 6.64%, which is considered on higher side and should be looked into.

9.2

At least three labours were required for continuous operation of the chaff cutter. One labour was required for feeding the fodder crop, one for collecting the stalk and the other for cranking the flywheel. An averagely built operator can crank the flywheel not more than 40 minutes continuously, at a standard speed of 50 revolution per minute and the average calories burnt by the operator was recorded as 536 to 754 kcal/h.

9.3

The wear rate of chaff cutter blade on mass and dimensional basis was measured to be 0.01 & 0.003 to 0.039 % respectively. The wear is considered normal.

Dimensions, Hardness and chemical composition of chaff cutter blade: 9.4

Chemical composition and hardness of rotary blades does not conform to the requirement of IS: 1511-1979. This should be looked into for corrective action.

- Dimension of chaff cutter blade does not meet the requirements of IS 1511-1979. Corrective measures should be taken in this regard. 9.5
- A coat of any suitable mineral jelly or any other corrosive preventives may be provided on the blades to meet the requirements of the relevant Indian Standard. 9.6
- Marking was not provided on the blades. This is therefore recommended to mark the blades with particulars such as Manufacturer's name and/or recognized trade-mark, size code, thickness, 9.7 and batch or code number as per the requirement of IS: 1511-1979.
- End-play was observed in the feed rolls. To rectify the same, bush bearings made of brass should be provided inside the hubs of feed rolls as per IS 7898-2001. 9.8
- Dimensions of various components such as feeding trough, flywheel, worm, worm gear, feed rolls, springs, back plate and stands does not meet the requirements of IS: 7898-2001. Corrective 9.9 measures should be undertaken.
- The worm gears should as far as possible, be enclosed and should preferably be run on an oil trough as per the requirement of relevant Indian Standard. 9.10
- Maximum height of cranking from ground level was measured as 1303 mm, which is on higher 9.11 side. This should be looked into.