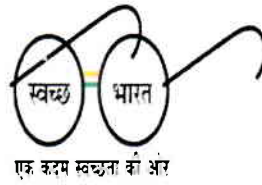


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व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT



संख्या / No.: Th - 03/240
माह / Month: January, 2016



SHIWANI PEDAL OPEARTED PADDY THRESHER, MODEL: BEST



सत्यमेव जयते

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 AND FARMERS WELFARE

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1. SCOPE OF TEST

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

- 1.1 Specifications
- 1.2 Performance and suitability of machine during operation in relation to:
 - Rate of work
 - Quality of work
- 1.3 Labour requirement
- 1.4 Wear of critical components
- 1.5 Ease of operation and adjustments

2. METHOD OF SELECTION

The test sample was directly submitted by the applicant at this Institute. Therefore, the method of selection is not known.

3. TEST CODE / PROCEDURE

IS: 3327-1982 (Reaffirmed March, 2009) (Specification for Pedal-Operated Paddy Threshers).

4. BRIEF DESCRIPTION OF MACHINE

The pedal-operated paddy thresher consists of a cylinder which is made up of threshing teeth welded on it. The cylinder and gear mechanism are fitted on frames. Ball bearings and bearing blocks are provided at the both end of the cylinder and gear mechanism. The drive gear is connected to the pedal through crank mechanism at both the sides of the thresher. When pedal is operated, the motion is transmitted to the drive gear through crank, which in turn, rotates the cylinder. It separates the grain by combing as well as beating action of the threshing loops when crop is held against rotating cylinder.

5. SPECIFICATIONS

5.1 General

Name and address of the manufacturer	: M/s. Shiwani Enterprises, Nahar Chowk, Koiriya Tola, Infront of Bus Stand, Raxaul – 845 305, East Champaran (Bihar)
Name & Address of Applicant	: Mr. Sunil Kumar M/s. Shiwani Enterprises, Nahar Chowk, Koiriya Tola, Infront of Bus Stand, Raxaul – 845 305, East Champaran (Bihar)
Make	: Shiwani
Model	: BEST
Type	: Pedal Operated
Size (mm)	: 600 × 255 φ (Length - across end discs x dia. - across threshing teeth)
Serial Number of machine	: 001
Year of manufacture	: N.A.
Country of origin	: India

10. DEFECTS, BREAKDOWNS AND REPAIRS

No breakdown was occurred during 20.3 h of threshing operation.

11. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**11.1 Summary of Performance Results :**

Speed of threshing cylinder (rpm)	Feed Rate (kg/h)	Output (Kg/h)	Threshed grain (%)	Un-threshed grain in output (%)	Broken grain (%)	Rubbish (%)	Grain Remaining on stalk (%)	Threshing efficiency (%)
425 to 435	100 to 156	33 to 51	91.6 to 95.3	0.8 to 1.5	Nil	3.2 to 7.6	0.8 to 9.5	89.0 to 98.4

11.1.1 Rate of work :

- (a) During tests, the feed rate of paddy crop varied from 100 to 156 kg/h,
- (b) The output of thresher varied from 33 to 51 kg/h, which is considered on lower side.

11.1.2 Quality of work :

- (a) During tests, un-threshed grain in main output was varied from 0.8 to 1.5% and the rubbish in main output was varied from 3.2 to 7.6%, which is on higher side and needs suitable modification.
- (b) The loss (Grain on stalk) during tests was varied from 0.8 to 9.5%, which is considered on higher side and should be looked into for corrective action.
- (c) The threshing efficiency of paddy thresher varied from 89.0 to 98.4%, which is not satisfactory and calls for modification.

11.2 The following particulars do not conform to the requirements of IS: 3327-1982, and hence, should be looked into for corrective action:

- (a) Material for cylinder end discs
- (b) Diameter of cylinder across end discs
- (c) Diameter of cylinder across slats
- (d) Size of slat
- (e) Distance between two slats
- (f) Projection of threshing teeth from slat surface
- (g) Dimension pedal frame fulcrum
- (h) Height of pedal board from ground level
- (i) Distance between centre of pedal board and the centre of pedal frame fulcrum

11.3 Labelling of the Machine:

11.3.1 Size of thresher should also be indicated in the labelling plate as per the requirement of IS: 3327-1982.

11.3.2 The particulars mentioned such as manufacturer's name and recognised trade-mark, rotational speed and also the size of thresher should be punched or stencilled on the base of the thresher to fulfil the requirement of IS: 3327-1982.

11.3.3 The Model is written as SIWANI in the labelling plate, whereas, in application, it is written as SHIWANI, which is erroneous. This should be looked into for corrective measures.

11.4 It was observed that inferior quality bearings were used in construction of the paddy thresher. Hence, it is recommended to use bearings of good quality for better performance and longevity.

11.5 Technical literature:

Technical literatures were not provided during the course of testing. It is recommended to bring out literatures such as Operator's Manual, Service Manual and Parts Catalogue, etc. in English, Hindi and other vernacular languages.

TESTING AUTHORITY



S. G. PAWAR
AGRICULTURAL ENGINEER



J. J. R. NARWARE
DIRECTOR

Test conducted and report compiled by : Anshul Pandey, STA(I) and Partha Lodh, TA

12. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's Comments
12.1	11.1.1, 11.1.2 & 11.2	The machine will be modified during commercial use.
12.2	11.3.3	Name of the manufacturer on the labelling plate will be corrected as SHIWANI ENTERPRISES.