

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट  
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2025/006

माह/Month: January 2025

THIS TEST REPORT VALID UP TO

:

31<sup>st</sup> DECEMBER, 2031



**STAR MANKU THRESHER FACTORY**  
**Self-Propelled Power Reaper**  
**(MODEL: SMPR-4)**



सत्यमेव जयते

Government Of India



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र  
**Farm Machinery Training and Testing Centre**  
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान  
**CSIR - Central Mechanical Engineering Research Institute**

महात्मा गांधी एवेन्यू, दुर्गापुर  
**Mahatma Gandhi Avenue, Durgapur**

पश्चिम बंगाल - 713209

West Bengal - 713209

Website: <https://cmeri.res.in>

**E-mail:** [fmttc.cmeri@gmail.com](mailto:fmttc.cmeri@gmail.com)

Telephone: 9434592007 / 7001361295

Fax: +91-343-2546745

CSIR/CMERI/FMTTC/2025/006	<b>STAR MANKU THRESHER FACTORY SELF-PROPELLED POWER REAPER (MODEL NO. – SMPR-4) (INITIAL COMMERCIAL TEST)</b>
---------------------------	---

<b>Name of Machine</b>	:	Star Manku Power Reaper
<b>Type</b>	:	Self-Propelled, walk behind
<b>Make</b>	:	M/s. Star Manku Thresher Factory
<b>Model</b>	:	SMPR-4
<b>Name and address of Manufacturer</b>	:	M/s. Star Manku Thresher Factory Bhulki, Domohana, Karandighi, Uttar dinajpur, 733215
<b>Name and address of Applicant</b>	:	ABDUS SAMAD Bhulki, Domohana, Karandighi, Uttar dinajpur, 733215
<b>Test Conducted at</b>	:	Farm Machinery Training and Testing Centre CSIR - Central Mechanical Engineering Research Institute, M G Avenue, Durgapur, Pin – 713209, West Bengal.

**THIS TEST REPORT IS VALID UP TO: 31<sup>st</sup> December, 2031**  
[vide DAC&FW OM No. 13-22/2020- M&T (I&P) dated 12.12.2023]



Report No.: CSIR/CMERI/FMTTC/2025/006      Month: January      Year: 2025

**CSIR - Central Mechanical Engineering Research Institute,  
Durgapur - 713209  
(W.B.), INDIA**

Report prepared by

*[Handwritten signature]*

Report verified by

*[Handwritten signature: Subrata Kr Mandal]*

Farm Machinery Training and Testing Centre,  
CSIR-Central Mechanical Engineering Research Institute, Durgapur  
**THIS REPORT IS VALID UPTO: 31<sup>st</sup> December, 2031**

1 of 26

Type of Test : Initial Commercial Test  
 Period of Test : March 2024 to January 2025  
 Test Report No. : CSIR/CMERI/FMTTC/2025/006  
 Month and Year : January 2025

- i. The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii. The data given in this report pertains to the particular machine submitted by the applicant for test.
- iii. The results presented in this report do not in any way attribute to durability of the machine.
- iv. The report should not be reproduced in part or full without prior permission of the Director, CSIR- Central Mechanical Engineering Research Institute, M G Avenue, Durgapur -713209 (West Bengal)
- v. This test report is not covered under BIS Certification. Therefore, the manufacturers cannot market the machine with ISI mark, only on the strength of this report.
- vi. This report cannot be used for legal purposes.

**SELECTED CONVERSIONS**

**1. Force**

$$1 \text{ kgf} = 9.80665 \text{ N}$$

$$= 2.20462 \text{ lbf}$$

**2. Power**

$$1 \text{ HP} = 1.01387 \text{ Metric HP (Ps)}$$

$$= 745.7 \text{ W}$$

$$1 \text{ Ps} = 735.5 \text{ W}$$

**3. Pressure**

$$1 \text{ psi} = 6.895 \text{ kPa}$$

$$1 \text{ kgf/sq.cm} = 98.067 \text{ kPa}$$

$$= 735.56 \text{ mm of Hg}$$

$$1 \text{ bar} = 100 \text{ kPa}$$

$$= 10 \text{ N/sq.cm.}$$

$$1 \text{ mm of Hg} = 1.3333 \text{ m-bar}$$

**4. Area**

$$1 \text{ ha} = 10000\text{m}^2$$

$$= 2.471 \text{ Acres}$$

Report prepared by

*[Signature]*

Report verified by

*[Signature]*

### 3 METHOD OF SELECTION

The test sample was randomly selected by Video call. The applicant arranged 05 samples of Self-Propelled Power Reaper (Model: SMPR-4) with same specifications. The Self-propelled Power Reaper with following serial number were considered for random selection.

Sample No	Reaper Serial Number
1	1
2	2 (Selected for Test)
3	3
4	4
5	5

**Table 1 Samples for random selection**

### 4 SPECIFICATIONS

#### 4.1 General

Name of machine	: Star Manku Power Reaper
Type of machine	: Self-Propelled, walk behind
Make	: Star Manku Thresher Factory
Model	: SMPR-4
Serial No.	: S0055
Name and address of manufacturer	: M/s. Star Manku Thresher Factory Bhulki, Domohana, Karandighi, Uttar dinajpur, 733215
Year of manufacture	: 2023
Country of origin	: India
Recommended crop	: Paddy, Wheat, Mustard.

#### 4.2 Details of prime mover

Name and address of manufacturer*	: M/s. Chongqing Hwasdan Machinery Manufacturing Company LTD. Xipeng Industry Zone, Jiulongpo, Changing – 401326, China.
Type	: Single Cylinder, Air cooled, 4 Stroke, OHV, 25° Inclined Horizontal Shaft.
Make	: HWASDAN
Model	: 170F/P-2
Sr. No.	: *234055442

Report verified by  
Subrata Kumar Mandal

Report prepared by  
Subrata Kumar Mandal

**16 COMMENTS & RECOMMENDATION**

- 16.1** The dimensions of the knife section and the knife back section do not conform to IS standards. It should be looked into
- 16.2** The amplitude of mechanical vibration marked as (\*) under section 7, are on higher side. It is not just directly concerned with operator's health, safety and comfort, but also adversely affects the useful life of the components. It needs to be corrected.
- 16.3** The noise level of this machine at the operator's ear level is higher than recommended. It should be looked into.
- 16.4** The user's manual, parts catalogue and service manual are provided. But it needs to be updated as per IS: 8132-1999.
- 16.5** Chemical analysis and Hardness of the knife blades does not confirm with the requirement as per IS standard. It should be looked into.
- 16.6** One labelling plate is riveted on the machine. It should be updated as per BIS standard.

Report prepared by



Report verified by



CSIR/CMERI/FMTTC/2025/006	<b>STAR MANKU THRESHER FACTORY          SELF-PROPELLED POWER REAPER          (MODEL NO. – SMPR-4)          (INITIAL COMMERCIAL TEST)</b>
---------------------------	--

### 17 TECHNICAL LITERATURE

The following literatures are provided by the applicant during the test along with the application form.

- a) User's manual book
- b) Parts' catalogue
- c) Service manual

These manuals need to be updated as per IS: 8132-1999.

### TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	<i>Jehel</i> 16/01/2025
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Training & Testing Centre	<i>Srinata K. Mansal</i> 16/01/2025
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>Sudip Sanyal</i> 16/1/25

### 18 APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
18	16.1 to 16.6	Noted and corrective actions will be taken against the given comments & Recommendations from 16.1 to 16.6

