ब्याबसायिक परीक्षण रिपोर्ट

संख्या/No. CSIR/CMERI/FMTTC/2022/002

COMMERCIAL TEST REPORT

माह/Month: May, 2022

THIS TEST REPORT VALID UP TO :

31st May, 2027



# **New Bengal Hydraulic Tractor Trailer**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अन्संधान 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:** sub\_mandal@cmeri.res.in Telephone: +91-343-2546749; 9434921623

Fax: +91-343-2546745

# BENGAL TRAILER HYDRAULIC TRACTOR TRAILER (INITIAL COMMERCIAL TEST)

### 4. SPECIFICATION

## 4.1 General

Name of manufacturer : New Bengal Agro Implements

Name of applicant : SEKH ABDUL AZIZ

Name of Machine : Tractor Trailer

Type : Hydraulic, Tipping

Make : New Bengal Agro Implements

Model : BENGAL TRAILER

Serial No. : T-1509, Chassis no- NBAI-T-1509

Year of manufacture : 2021

Recommendedtractor power(hp) : 39 & above

Unload mass (ton) : 1.6

Load recommended (ton) 3.4

Gross mass (ton) : 5

Height of hitch from ground level, (mm) : 600

Inner size of platform, (L  $\times$  W  $\times$  H), (mm) : 3260 $\times$ 1740 $\times$ 500

Inner volume of platform, (mm<sup>3</sup>) :  $2.84 \times 10^9$ 

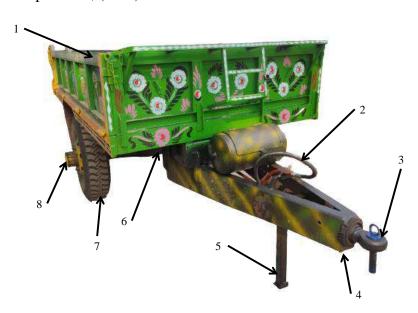


Fig. 1 Schematic view of hydraulic tractor trailer

# BENGAL TRAILER HYDRAULIC TRACTOR TRAILER (INITIAL COMMERCIAL TEST)

#### 4.13 Other details:

- 1. At rear LHS & RHS sub-side doors are provided by welding angle irons to get into the trailer.
- 2. At front side two steps are provide by welding pipes to trailer box assembly for getting into the trailer.
- 3. At each side eight nos. of hooks and at front & rear side two rings are provided for typing the roper during transportation.
- 4. At front & rear two pipes and at side four pipes provided to put as support.
- 5. Grease nipple (8 nos.) are provided
- 6. Tool box is provided.

### **4.14 Overall dimensions (mm):**

Length : 4540 Width : 1970 Height : 1730 Ground Clearance : 430

4.15 Mass (kg): 1600

### 4.16 Color of Trailer:

Trailer : Green, white, black, red and Yellow

Chassis, body & axle : Dark grey & black

# 4.17 Material requirements for components of trailer:

| Si.<br>No. | Name of components | Material as per<br>IS 8213: 2000 | Observe         | Conformity<br>to IS |
|------------|--------------------|----------------------------------|-----------------|---------------------|
| 1.         | Chassis            | Mild steel                       | Mild steel      | Conforms            |
| 2.         | Drawbar            | Mild steel                       | Not applicable  |                     |
| 3.         | Tow eye or tow jaw | Carbon steel                     | Carbon steel    | Conforms            |
| 4.         | Platform           | Mild steel                       | Mild steel      | Conforms            |
| 5.         | Sides boards       | Mild steel timber                | Mild steel      | Conforms            |
| 6.         | Leaf spring        | Spring steel                     | Not applicable  |                     |
| 7.         | Axle               | Structure steel                  | Structure steel | Conforms            |
| 9.         | Hub                | Cast iron                        | Cast iron       | Conforms            |
| 10.        | Brake drum         | Cast iron,                       | Not applicable  |                     |
| 11.        | Cap                | Cast iron,                       | Mild steel      | Conforms            |
|            |                    | Mild steel                       |                 |                     |
| 12.        | Washer             | Mild steel                       | Mild steel      | Conforms            |

# BENGAL TRAILER HYDRAULIC TRACTOR TRAILER (INITIAL COMMERCIAL TEST)

### 9. EASE OF OPERATION AND ADJUSTMENTS

No difficulty was observed during the operations and adjustments of trailer.

### 10. DEFECTS, BREAKDOWN AND REPAIRS

No defects, breakdown and repaired was occurred during entire of testing

# 11 SUMMURY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 11.1) The lightening arrangements of trailer is not provided as per IS 8213:2000. This should be looked into for corrective actions.
- 11.2) The provided labeling plate should be as per requirements of IS 8213:2000.
- 11.3) The dimension of hydraulic tipping cylinder does not meet, in full to the requirements of IS 12371:1998. This should be taken care for correctives action.
- 11.4) Dimensional requirements of axle (semitrailer) conforms IS 8213:2000.
- 11.5) The specification of trailer does not conform in full, to the IS8213:2000. This should be looked into the corrective action.
- 11.6) The dimension of various components of axle assembly do not conform, in full, the requirements of IS 8213:2000. This should be looked into for corrective action.
- 11.7) The demission of ring does not meet, in full the requirements of IS 11270:1980 (Reaffirmed 1999). This should be taken care or corrective action.
- 11.8) Operation, services, maintenance manual and parts catalogue was not provided.
- 11.9) Adequacy of literature:

Operational manual, service manual, maintained manual and parts catalogue of trailer in English was provide in single booklets from reference during the test. However, this may be brought out in Hindi and other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user technical personnel.

CSIR/CMERI/FMTTC/2022/002

# BENGAL TRAILER HYDRAULIC TRACTOR TRAILER (INITIAL COMMERCIAL TEST)

# **TESTING AUTHORITY**

| Dr. ANJALI CHATTERJEE<br>Chief Scientist               | Jyr21/05/2022                   |
|--|---------------------------------|
| Dr. SUBRATA KUMAR MANDAL<br>Senior Principal Scientist | Subrate Kr Mansel<br>31/05/2022 |
| Md. IMRAN SHEKH<br>Senior Scientist                    | Inran 31/05/22                  |

## 12. APPLICATN'S COMMENTS

| Para No. | Our Reference                            | Applicants Comment              |
|----------|--|---------------------------------|
| 12       | 11.1, 11.2, 11.3, 11.5, 11.6, 11.7, 11.8 | Noted the same and will improve |



