व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)
COMMERCIAL TEST REPORT
(INITIAL)

संख्या/No.: Machine-421/1255
माह/Month: February, 2021
Validity: 31.01.2026

DIVYA SHAKTI DS-100P POWER WEEDER

सत्यमेव जयते

भारत सरकार
Government of India
कृषि एवं किसान कल्याण मंत्रालय
Ministry of Agriculture and Farmers Welfare
कृषि, सहकारिता एवं किसान कल्याण विभाग
Department of Agriculture, Cooperation and Farmers Welfare
दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
Southern Region Farm Machinery Training and Testing Institute
ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)
Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)
【An ISO 9001:2015 CERTIFIED INSTITUTE】

Website: http://srfmtti.dacnet.nic.in/
E-mail: fmti-sr@nic.in Tele.: 08551-286441

Manufacturer : M/s. Chongqing Hongmei Technology Co. Ltd., No.9, Huzhu Village, Baqiao Town, Dudukou Dist., Chongqing City, **China** .

Applicant : M/s. Chirag Corporation, 320, Marshal House, 33/1, N.S. Road, Kolkata – 700 001, West Bengal, India.

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Report No. : Machine-421/1255 Month: February Year: 2021

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17. COMMENTS & RECOMMENDATIONS

17.1 Engine Performance:

17.1.1 The maximum power and rated power were observed 3.2 & 2.4 kW under natural ambient condition against the declared value of 4.0 kW respectively.

17.1.2 Specific fuel consumption of engine corresponding to maximum power & rated power was recorded as 379 & 394 g/kWh against the declared value of 375 g/kWh respectively. This should be looked into for corrective action.

17.1.3 Max. torque was observed as 9.1 Nm against the declared value of 10.0 Nm.

17.1.4 Back up torque of engine was observed as 4.48 %, against the declared value of 10 %. This should be looked into for corrective action.

17.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 9.10 Nm & 8.40 Nm respectively, while further loading, sudden drop of engine speed and thick black smoke was noticed.**

17.2 Max. Noise at operator's ear level & by stander's position was observed as 87 & 72 dB (A) respectively against the limit specified by the ILO.

17.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 410 microns, which is higher than the limit specified by the ILO. Therefore necessary action to dampen the vibration should be taken in to account.

17.4 The hardness of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).

17.5 The chemical composition of rotary blade conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).

17.6 The provided labeling plate should be as per the requirement IS.

17.7 Technical literature:

Instruction manual and parts catalogue of power weeder and engine in a single booklet was supplied with the test sample for reference during the test. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY:

D.C. MOULI AGRICULTURAL ENGINEER	
P.C. MESHRAM SENIOR AGRICULTURAL ENGINEER	
Dr. P.P. RAO **DIRECTOR**	

18. APPLICANT COMMENTS

i. The draft test report was issued to applicant. In applicant's comment they stated that they have no any specific comments on the report, however they forwarded the DTR to engine manufacturer & weeder manufacturer for further improvement if any.

ii. Applicant will make suitable arrangement to reduce mechanical vibration and other constraints if any during manufacturing level.