व्यावसायिक परीक्षण रिपोर्ट COMMERCIAL TEST REPORT

संख्या / No.: IMP-1037/2625/2020

माह/Month: December, 2020

THIS TEST REPORT VALID UP TO : 31st December, 2027



SPECTRA PRECISION (TRIMBLE NAVIGATION) AG 402, LASER LAND LEVELER



भारत सरकार

Government of India
कृषि एवं किसान कल्याण मंत्रालय
Ministry of Agriculture and Farmers Welfare
कृषि, सहकारिता एवं किसान कल्याण विभाग

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15. FIELD TEST

The field tests of 22 hours with 6 replications were conducted. The field performance observations are given in Annexure-I.

The summary of field performance test is given in Table IX.

TABLE-IX: Summary of field performance

Sl. No.	Parameters		Observations
i)	Tractor used		Mahindra, Arjun-555 DI
ii)	Gear used		H-1
iii)	Type of soil	0.50	Sandy loam
iv)	Av. soil moisture, %		15.8 to 19.1
v)	Av. bulk density of soil, g/cc		Nemark markets from
	Before operation		1.72 to 1.93
	SAND MISSELL SO BLONDINGS AC	After operation	1.83 to 1.94
vi)	Av. area covered, ha/h		0.058 to 0.125
vii)	Av. time required for one hectare, h		8.0 to 17.24
viii)	Av. fuel consumption		
	- 1/h		3.05 to 3.90
	- I/ha MCDC 200 TH check To platf		24.40 to 63.92
ix)	Av-total volume of cut, m ³		36.56 to 103.66
x)	Av- total volume of fill, m ³		19.96 to 42.74
xi)	Av- total volume of earth work	m^3	56.53 to 146.22
	resorted position for an anaestes.	(m^3/h)	25.66 to 40.01
		(m^3/l)	6.58 to 11.30
xii)	Leveling Index before operation, cm		3.03 to 7.36
xiii)	Leveling Index after operation, cm		0.32 to 0.56
xiv)	Draft requirement, kg Range (Average)		371 to 547

15.1 Rate of Work

- **15.1.1** The field capacity in sandy loam soil was recorded as 0.058 to 0.125 ha/h.
- **15.1.2** Av-total volume of cut 36.56 to 118.18 m³
- **15.1.3** Av- total volume of fill 19.96 to 42.74 m³

15.1.4	Av- total volume of earth work	m^3	56.53 to 146.22
- 55	NUMBER TO SERVICE STATE OF THE	(m^3/h)	25.66 to 42.89
18.10	100 - 100 8001	(m^3/l)	6.58 to 11.30

15.1.5 The time required to cover one hectare area was recorded as 8.0 to 17.24 h.

15.2 Quality of work

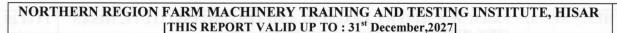
Leveling Index before and after field operation was observed from 3.03 to 7.36 and 0.32 to 0.56 respectively.

15...3 Fuel Consumption:

l/h : 3.05 to 3.90 l/ha : 24.40 to 63.92

16 CRITICAL TECHNICAL SPECIFICATIONS

Deferred till 31.03.2021 vide Ministry O.M. No 13-13/2020 M&T, (I&P) dated 22.12.2020.



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X	The blade and mould board should have a contour such that it allows the free rolling of earth. The curvature of mould board with blade shall be 300 or 375 mm with a tolerance of ± 20 mm.	The mould board has a contour shape with the curvature of 147 mm that allows the free rolling of earth.	Does not conform
17.3	Workmanship and finish:	(4)	eili ii
i	All components of terracer shall be free from pits, burrs and other visual defects.	All components of terracer are free from pits, burrs and other visual defects.	Conforms
ii enteres	The welding of various parts shall be free from blow holes, exposed porosity, exposed inclusions unfilled crate and un fused welds.	The welding of various parts are free from blow holes, exposed porosity, exposed inclusions unfilled crate and un fused welds.	Conforms
iii	The exposed metallic parts shall be free from rust and shall have a protective coating.	The exposed metallic parts are free from rust and have a protective coating.	Conforms
17.4	Marking and packing:	of the shall be stole on let	d eff h
1900/249	Marking- Each terracer shall be marked with: a) Manufacturer's name and trade-mark, if any. b) Size; and c) Batch or code number These particulars shall be stamped, embossed or engraved on metallic plate and rigidly fitted on a non-wearing part of terrace.	Not marked	Does not conform

18. SOUNDNESS OF CONSTRUCTION

No noticeable breakdown occurred during field test.

19. COMMENTS & RECOMMENDATION

- 19.1 The labeling plate MUST be riveted on the machine with following information
 - i) Name and address of manufacture
 - ii) Country of origin
 - iii) Make
 - iv) Model
 - v) Year of manufacture
 - vi) Serial number
 - vii) Wt in kg
 - viii) Tractor kW/hp



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- 19.2 The safety warnings, signs and pictograms are not provided on the machine. It should be provided for safety of the users.
- 19.3 The hardness of the soil cutting blade does not meet the requirement of IS: 9813-2002. This Should be looked into.
- 19.4 The beveling edge is not provided on cutting blade. It should be provided.

20. TECHNICAL LITERATURE

Following literature was submitted by applicant for reference during test.

- (i) Operating manual of laser land leveler.
- (ii) User manual of Transmitter.

However, the user manual should be updated as per IS: 8132-1999.

The part's catalogue and service manual should provided for guidance of user's and technical persons.

TESTING AUTHORITY

SANJAY KUMAR AGRICULTURAL ENGINEER	< Amor
P. K. PANDEY DIRECTOR	UBn-msh
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Test report compiled by C. Veeranjaneyulu, Senior Technician

21. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant comments
21.1	19.1	We will provided.
21.2	19.2	Caution stacker will be implement.
21.3	19.3	We will improve hardness as per IS: 9813-2002 of blade
21.4	19.4	Beveling edge of cutting blade will be provided.

