TRACTOR OPERATED POWER SPRAYER
"NEW GILL"

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE
(DEPARTMENT OF AGRICULTURE & COOPERATION)

NORTHERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE TRACTOR NAGAR, SIRSA ROAD, HISAR-125001 (HARYANA)

Website: http://nrfmttidacnetnicin
E-mail: fmti-nrnicin
| Cl. 5.17 | The fuel and chemical discharge controls shall be in easy access of the operator. | Not applicable as it is tractor powered sprayer. |  
| Cl.5.18 | Air pressure chamber shall with stand the test prescribed in 8.7 without any deformation or damage. | No damage found in air pressure chamber | Conforms |  

**Cl.6. IS 11313:2007 PERFORMANCE REQUIREMENTS**

| Cl.6.1 Discharge rate/Suction capacity | When tested in accordance with the method given in 8.3, the pump shall be capable of discharging/sucking a minimum of 8000 ml. water per minute at its rated speed and rated pressure. | The pump is capable to discharge 46105 ml/min without gun at 900 rpm of pump speed and 4.5 kg/cm² pressure | Conforms |  
| Cl.6.1.1 | The discharge rate/suction capacity shall be declared by the manufacturer | Declared as on ID plate of pump 39 – 50 l/min | Conforms |  
| Cl.6.2 Volumetric Efficiency Cl6.2.1 | When determined in accordance with 8.4.1, the volumetric efficiency of the piston/plunger type pump shall minimum 80 percent. | The volumetric efficiency is 90.80% with in specified limit | Conforms |  
| Cl.6.2.2 | The volumetric efficiency requirement for roller vane type pump shall be minimum 80% | Not applicable |  

| Cl.6.3 Power requirement | When tested in accordance with the method given in 8.5, pump shaft power requirement shall not be more than that of the value declared by the manufacturer. | Max pump shaft power requirement is 1.49 kW against the declared value of 2.20-3.68 kW by the manufacturer. (See annexure 2 for more details) | Conforms |  
| Cl.6.4 Maximum achievable pressure | When tested in accordance with the method given in 8.7, maximum achievable pressure shall not be less than that of the value declared by the manufacturer. | Maximum achievable pressure is more than the declared value of 15-35 kg/cm². | Conforms |  
| Cl.6.5 Endurance test | Sprayer shall withstand the test endurance test specified in 8.8 and the variation in Discharge rate between first and last observation shall not be more than ± 5 Percent. | Endurance test of 50 hrs. completed without any breakdown & the variation in pressure. Percentage variation in | Conforms |  

NORTHERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE-HISAR
6. COMMENTS:-
Tractor operated hydraulic power sprayer ‘New Gill’ conforms all the clauses of IS: 11313-2004 except requirement specified in the following clause. These should be rectified and incorporated at manufacturing level:-
   i) IS:4468(part-1)-2001- (a) Lower hitch point span, (b) Diameter for linch pin for upper hitch pin & (c) Diameter for linch pin for lower hitch pins  (please refer para 4.8 of the test report for more details)
   ii) Cl. 5.5.2 IS:11313-Dec. 2007 Drain plug
   iii) Cl. E.6 IS: 3652: 1995 – Batch or code no. of spray gun.
   vi) Cl.4.3 IS:11313:2007- Declaration from applicant for material used for different components.

TESTING AUTHORITY

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<th>(P. K. CHOPRA)</th>
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Test report compiled by Maan Singh, Technical Assistant

APPLICANT’S COMMENTS

No comments received