



**उत्पाद मैनुअल
आई एस 15265:2003 के अनुसार
कृषि पम्पों की चूषण और वितरण लाइनों के लिए
पॉलीमर प्रबलित ताप सुघटय अथवा नम्य
पिवीसी पाइप के लिए**

दस्तावेज़ संख्या – पी एम/ आई एस 15265/2/जून 2021

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम , 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/ प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
FLEXIBLE PVC PIPES OR POLYMER REINFORCED
THERMOPLASTIC HOSES FOR SUCTION AND
DELIVERY LINES OF AGRICULTURE PUMPS
ACCORDING TO IS 15265 : 2003**

Document No.- PM/ IS 15265/ 2/ June 2021

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

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1.	Product	:	IS 15265 : 2003
	Title	:	Flexible PVC Pipes or Polymer Reinforced Thermoplastic Hoses for Suction and Delivery Lines of Agriculture Pumps
	No. of Amendments	:	2
2.	Sampling Guidelines:		
a)	Raw material	:	NA
b)	Grouping guidelines	:	One sample hose of maximum nominal bore shall be tested to cover hoses of all sizes upto and including the size of the sample tested.
c)	Sample Size	:	Qty - 30 m
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day ::		
	i) Dimensions and tolerances (Clause 5)		
	ii) Hydrostatic test at standard atmospheric condition (Clause 6.1)		
	iii) Hydrostatic test at 55 ± 2°C (Clause 6.2)		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 15265: 2003 with the following scope:		
	Name of the product	Flexible PVC Pipes or Polymer Reinforced Thermoplastic Hoses for Suction and Delivery Lines of Agriculture Pumps	
	Nominal Bore		

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Dimensions and Tolerances (Clause 5)	i) Vernier calliper ii) Measuring tape/Steel tape iii) Steel scale
2	Hydrostatic Test at Standard Atmospheric Condition (Clause 6.1)	i) Temperature and Humidity controlled cabinet to maintain temperature of $27 \pm 2^\circ\text{C}$ and $65 \pm 5\%$ Rh ii) Hydrostatic pressure testing machine with pressure gauge/pressure transducers and timer iii) End plugs of appropriate size for pipes iv) Steel scale
3	Hydrostatic Test at $55 \pm 2^\circ\text{C}$ (Clause 6.2)	v) Stop watch vi) Hygrometer vii) Dry and wet bulb thermometer viii) Thermometer ix) Thermostatically controlled Water bath with digital temperature indicator and stirrer
4	Pressure Impulse Test (Clause 6.3)	i) Pressure impulse test set up with pressure gauge and timer as per clause B-1 and Fig. 2 of IS 15265 : 2003 ii) End plugs of appropriate size for pipes iii) Water with suitable dye iv) Steel scale v) Temperature and Humidity controlled cabinet to maintain temperature of $27 \pm 2^\circ\text{C}$ and $65 \pm 5\%$ Rh vi) Hygrometer
5	Vacuum Test (Clause 6.4)	i) Vacuum pressure test set up with pressure gauge to meet requirements of clause C-1 of IS 15265 : 2003 ii) End plugs of appropriate size for pipes iii) Thermostatically controlled Water bath with digital temperature indicator and stirrer iv) Steel scale v) Air conditioner vi) Stop watch vii) Dry and wet bulb Thermometer viii) Thermometer

6	Reinforcement Fracture Test (Clause 6.5)	i) Temperature and Humidity controlled cabinet to maintain temperature of 27 ± 2 °C and 65 ± 5 % Rh ii) Reinforcement Fracture Test Apparatus with extension pieces of hardwood or metal of appropriate size ii) Magnifying glass
7	Reinforcement Fracture Test (Clause 6.6)	i) Bend radius test apparatus as per clause E-1 and Fig 4 of IS 15265 : 2003 ii) Stop watch
8	Cold Bend Radius (Clause 6.7)	iii) Deep Freezer with digital temperature indicator
9	Loss in Mass on Heating (Clause 6.8)	i) Weighing balance ii) Micrometer iii) Thermostatically controlled water bath or air oven to operate within range of 50 to 150 ± 2 °C temperature iv) Containers as per Clause E- 1.3 of IS 15265 : 2003 iv) Cylindrical Metal Cages as per Clause E- 1.3 of IS 15265 : 2003 v) Activated Carbon of 4 to 6mm size
10	Effect of Sunlight (Clause 6.9)	i) Thick paper ii) Steel scale iii) Timer iv) Arrangement to keep sample exposed to sun light for exposure not less than 1600 h at ambient temperature of not less than 20°C.
11	Effect on water (Clause 6.10)	i) Distilled water ii) Air conditioner iii) pH meter iv) Testing reagent and equipment for v) determination of cadmium, mercury, lead, tin and other toxic substances.

The above list is indicative only and may not be treated as exhaustive.

ANNEX C
Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirement of IS 15265: 2003.

4. CONTROL UNIT – All hoses/pipes of same size manufactured from same raw material and from similar machinery up to a maximum period of eight hours duration in a day under similar conditions of manufacture shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Materials and Construction	4	IS 15265	R	-	Each hose	-
5	Dimensions and Tolerances	5.1, 5.1.1 and 5.2	IS 15265 IS 12235 (Part1)	R	Five	Each control unit	-
6	Performance requirements of hoses:						
6.1	Hydrostatic test at standard atmospheric condition	6.1, Annex A and Table 3	IS 15265	R	Two	Each control unit	-
6.2	Hydrostatictestat55±2°C	6.2, Annex A and Table 4	IS 15265	R	Two	Once in a week	-
6.3	Pressure impulse test	6.3 and Annex B	IS 15265	S	Three	Once in three year	This is type approval test. This test shall be also be carried out whenever there is change in design or new variety is to be included in the licence.
6.4	Vacuum test requirement	6.4, Table 5 and Annex C	IS 15265	S	Two	Once in a month	-

6.5	Reinforcement Fracture test requirement						This test shall also be carried out whenever there is change in design of hose/pipe.
	Control Test for 336h	6.5, Table 6 and Annex D	IS 15265	S	Three	Once in three months	
	Type Test for 4months	6.5, Table 6 and Annex D	IS 15265	S	Three	Once in a year	
6.6	Minimum bend radius requirement	6.6 and Annex E	IS 15265	R	Two	Once in a week	-
6.7	Cold bend radius requirement	6.7 and Annex E	IS 15265	R	Two	Once in a week	-
6.8	Loss of mass on heating	6.8 and Annex F	IS 15265	R	Two	Once in a week	-
6.9	Effect of sunlight	6.9	IS 15265	S	Two	Once in a year	This test shall be also be carried out whenever there is change in design of hose/pipe.
6.10	Effect on water	6.10	IS 15265	S	1	Once in six months	Smallest size pipe/hose produced shall be tested @

@ Additional sample shall be tested whenever there is a change in formulation/composition.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.