

## केन्द्रीय मुहर विभाग - III

हमारा संदर्भ- केन्द्रीय मुहर विभाग-3/16: IS 14220

दिनांक :18 10 2018

**विषय: अनुपालन हेतु एस आई टी**

सभी शाखा कार्यालय से आग्रह है कि एस आई टी का अनुपालन तत्काल प्रभाव से सुनिश्चित करें।

(अमित कुमार)  
वैज्ञानिक 'सी' (सी एम डी-III)

**प्रमुख (सी एम डी-III)**

सभी क्षेत्रीय/शाखा कार्यालय  
आई टी एस विभाग – बीआईएस इंटरनेट पर अपलोड करने हेतू

### **CENTRAL MARKS DEPARTMENT-III**

Our Ref: **CMD-3/16: IS 14220**

**Date: 18 10 2018**

**Subject: SIT for IS 14220 :2018 – Openwell Submersible Pumpsets.**

This has reference to the subject mentioned above.

BOs may kindly ensure implementation of the SIT with immediate effect.

Amit Kumar  
Sc. C (CMD III)

**Head (CMD - III)**

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**SCHEME OF INSPECTION AND TESTING FOR CERTIFICATION OF  
OPENWELL SUBMERSIBLE PUMPSETS  
ACCORDING TO IS 14220: 2018**

**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 equipment.

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

**3. LABELLING AND MARKING** – As per the requirements of IS 14220: 2018.

**4. 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.

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

**5. 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, 20016.

Table 1 .....

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement	Levels of Control		
Cl.	Requirement	Test Methods		R: required (or) S: Sub-contracting permitted	No. of Sample	Frequency	Remarks
		Clause	Reference				
7	Material of Construction	7.1	IS 14220	S	One	Each consignment	No further testing is required, if accompanied with test certificate or ISI marked
	Gaskets,Sealsand Packings	7.2	IS 14220				
10	<b>GENERAL REQUIREMENTS</b>						
10.1	General Requirements	17	IS 5120 IS 9283	R	Every Pumpset / Every motor		
10.2	Casing	15.5	IS 14220	R	Every Pump Casing		
10.4	Shaft	10.4.2	IS 14220 IS 3073	R	Every Shaft		
10.5	Balancing	10.5	IS 14220	R	Every impeller and rotor		
10.6	Provision for Earthing	10.6	IS 14220	R	Every motor		
10.7	Terminal Marking and Direction of Rotation	10.7	IS 14220	R	Every pumpset		

14	<b>TEST FOR ELECTRICAL PERFORMANCE ON MOTOR FOR OPENWELL SUBMERSIBLE PUMPSET</b>						
14.9	<b>ROUTINE TEST</b>						
	Insulation resistance (before HV test).	14.3	IS 14220	R	Every Motor		No further testing is required, if motor is ISI marked.
	High Voltage Test	14.4	IS 14220				
	No load running of motor and reading of current voltage, power and speed		IS 9283				
	Locked rotor reading of voltage, current and power input		IS 9283				
	Reduced voltage running up test at no load		IS 9283				
14.10	<b>TYPE TEST</b>						
	Insulation resistance (both before and after HV test)	14.3	IS 14220	R	One sample of each identical type and design  (Out of every 100 pumpsets or every month whichever is earlier)		
	High Voltage Test	14.4	IS 14220				
	Measurement of stator resistance	14.10 (c)	IS 14220				
	Breakaway (starting) torque	14.7	IS 14220				
	Leakge Current Test	14.5	IS 14220				

	Temperature rise Test at rated voltage	14.6.5	IS 14220	R	One sample of each identical type and design	
	Temperature rise test at reduced voltage	14.6.6	IS 14220		(Out of every 100 pumpsets or every month whichever is earlier)	
15	Testing for Hydraulic Performance on Pump for Open well Submersible Pumpset	15.2 to 15.4	IS 14220	R	One sample of each identical type and design  (Out of every 100 pumpsets or every month whichever is earlier)	
16.	Guarantee and Tolerance on Openwell Submersible Pumpset Performance	16	IS 14220			
8	Design Features	8	IS 14220			

**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.