इरिसेट

IRISET

ब्लॉक सिगनलिंग प्रयोगशाला **BLOCK SIGNALLING LABORATORY**

प्रयोग सं. बी एस एल - 01 **EXPERIMENT NO.: BSL. - 01**

नाम
Name : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुक्रमांक Roll No : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

प्राप्तांक Marks Awarded :

पाठ्यक्रम Course : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

दिनांक Date : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुदेशक के आद्यक्षर Instructor's Initial :

Study the external parts, internal parts, token and Normal operations in Neale's Ball Token Block Instrument. As per Specification No: IRS - S 23

I. Identify the following external parts of the instrument, write the identification number.

S.No.	Part Name	Number
1.	Bell Plunger	
2.	Bottom Handle	
3.	S.M.'s Key	
4.	Single Stroke Bell Assembly i) Flat Gong ii) Sheep Gong	
5.	Token Windows	
6.	Top Handle	
7.	Needle Indicator	
8.	Turn Table	
9.	LSS Key	
10.	Token Exit	
11.	Telephone	
12.	Maintainer's (S &T) Key	

II. Identify the following internal parts of the instrument, write their identification number

S.No	Part Name	Number
1.	Rocker Arm	
2.	TCF Lock Coil	
3.	TCF Lock Pawl	
4.	TGT Lock Coil	
5.	TGT Lock Pawl	
6.	Rack	
7.	Token Jaw	
8.	Polarised Relay	
9.	Pinion	
10.	Fork Lever	
11.	Safety Catch	
12.	Ball Token Selector	
13.	SM Key Contact	
14.	Normal Rest Contact	
15.	Token Indicator	
16.	Lock Replacer Disc	
17.	Commutator Assembly	
18.	Contact Arrangement	
19.	Spring Clutch Assembly	
20.	LSS Electrical Control	
21.	Jerking Contact	

III. Observe the tokens used in the instruments of Station 'A' & 'B' and note the following with regards to:

a) Shape
b) Configuration of the Hole
c) Observe other tokens available and their hole configuration and make a sketch of each configuration (S. 20840 to 20844)
d) Purpose of different configuration
e) Maximum No. of tokens which can be accommodated in an instrument _____ **(40, 36)**

IV. Extract all the tokens from the instruments at one end say at Station 'A' and then try to turn Bottom Handle to TGT at Station 'A' with co-operation of the other end, after the Station 'B' has turned his Bottom Handle to TCF position. **Possible/ Not Possible**
Because _____ has locked the Bottom Handle.

V. Insert tokens into instrument at Station 'A' slowly manipulate the Bottom Handle to TGT side by lifting the TGT lock and observe whether the token is released from the instrument before reaching the TGT position **Token released/Not released**

Even after reaching the TGT position, do not release the Bottom Handle to house in the notches and see whether the token is released. **Token released/Not released**

Now release the Bottom Handle to house in the notches and observe whether the token is released. **Token released/Not released**

Inference: Token is released from the instruments only on turning the Bottom Handle to TGT position and _____ in the notches ensuring the force dropping of _____ lock to prevent the possibility of _____ the Bottom Handle from TGT position after the extraction of token, in case of TCF lock sticking or mechanical jamming.

(**TCF, Housed, Normalising**)

VI. Operate the instrument as per the instructions given below and fill the columns in the following table: -

Operation at Station 'A'	**At Station 'A'**			**At Station 'B'**			**Operation at Station 'B'**
	Deflection of		**Lock energ-ised**	**Deflection of**		**Lock energ-ised**	
	Galvo	**PR**		**Galvo**	**PR**		
1. Press bell plunger							2. Turn bottom handle to TCF position
4.Turn bottom handle to TGT position and obtain token							3.Press bell plunger
5. Press bell plunger							6. Try to normalise the bottom handle Yes/No
8.Try to normalise the Bottom Handle Yes/No							7.Press bell plunger
9.Token obtained is sent to station 'B'							10. Token received is inserted into the instrument
12.Turn Bottom Handle to Line closed							11.Press bell plunger
13.Press bell plunger							14.Turn Bottom Handle to Line closed

Inference:

i) Observe Galvo indications: –
On pressing the bell plunger
a) When the bottom handle is in Line closed position, the needle deflects_____ **(Left, Right)**
b) When the bottom handle is in TCF or TGT position, the needle deflects_____ **(Left, Right)**
c) When the bottom handle is in TCF or TGT position, token inserted into the instrument and bell plunger pressed, the needle deflects_____ **(Left, Right)**

ii) The lock required to be energized to turn the bottom handle to Line closed position from TCF or TGT position is always _____ **(TGT Lock, TCF Lock)**

iii) The lock required to be energized to turn the bottom handle to TGT position from Line closed position is _____ **(TGT Lock, TCF Lock)**

iv) For one complete sequence of block handle operation of the instrument
a) TCF lock is energised _____ times **(One, Two, Three)**
b) TGT lock is energised _____ times **(One, Two, Three**

v) It is not possible to normalize the instrument prior to the insertion of token since both the commutators of the instruments are in _____ position, causing the energisation of TGT lock at the other end, instead of TCF lock. **(Normal, Reverse)**

Signature of Trainee