

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF PONDURU STATION
(BROAD GAUGE)

No : WTF/5/SWR/PDU

Date of Issue: _____

Date brought into force: _____

Ref Letter No. : 2000/Safety A&R)/19/36 Dt:27.10.2005 of Railway Board.

NOTE: -

The Station Working Rules must be read in conjunction with General& Subsidiary rules and Block Working Manual. These rules do not in any way supersede any rules in the above books.

1. STATION WORKING RULE DIAGRAM:

- (i) Station Working Rule diagram No. SI/WRD/23008 Alt 'I'.
- (ii) Signal Interlocking Plan No. SI/23008 Alt 'I'

2. DESCRIPTION OF STATION: GENERAL LOCATION:**2.1**

a)	Name of the station	PONDURU
b)	Class of station	'B' class
c)	Section	Howrah-Visakhapatnam
d)	Double line/Single line:	Double- line
e)	Electrified/Non Electrified	Electrified
f)	Gauge BG/MG/NG	BG
g)	Railway	East Coast Railway
h)	Route	'B'
i)	Situated at	Km 764.193
j)	Reckoned from	Howrah
k)	Number of cabins	Centrally operated VDU.

2.2. BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLAYING SIDINGS.**2 2 1 BLOCK STATIONS ON EITHER SIDE AND THEIR DISTANCES:**

S No	Adjacent Block-section	Distance	Direction
a	DUSI (DSI)	8.830 km	HWH end
	SIGADAM(SGDM)	10.100 km	VSKP end

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b	Provision of IBS	UP IBS at km:768.833 DN IBS at km: 768.633	Nil
c	Automatic signal	Nil	Nil
d	DK station/Outlying sidings	Nil	Nil
E	Passenger halt	Nil	Nil

2.2.ii. IBH/IBS/OUT LYING SIDING/DK STATION:

IBH signal is provided between SIGADAM and PONDURU stations on both UP and DN lines at Km 768.833 and 768.633 respectively.

Details of working of IBH are given in appendix –‘F’

2.2.iii PASSENGER HALT.

---NIL---

2.3. BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS .

Between Stations	The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' end
PDU-SGDM Up Direction	a) From UP Advance starter No 13 of PDU. b) From UP advanced starter signal no. 15 of PDU.	a)To a point 400M beyond IB Home signal no.15 of PDU at km 768.833. b)To the BSLB on UP line of SGDM.
PDU-SGDM Dn Direction	a) From Dn Advance starter No.14 of SGDM. b) From DN IB Home signal no. 20 of SGDM.	a)To a point 400M beyond IB Home signal no.20 of SGDM at km 768.633. b)To the BSLB on DN line of PDU.
PDLI-DSI Up Direction	From UP Advance starter . No 13 of DSI.	Up to the outer most facing point No 21A of PDU station.
PDU-DSI Dn Direction	From Dn Advance starter No.14 of PDU.	Up to the outer most facing point No 22A of SGDM station.

2.4 GRADIENTS WITHIN STATION LIMITS: TOWARDS VSKP END (UP AND DOWN LINES)

From	To	Gradient
CSB	CH: 243.840 M	Level
CH: 243.840 M	CH: 731 520 M	1 in 400 Falling.
CH: 731.520 M	CH: 822.040 M	1 in 300 Falling.

CH: 822.040 M	CH. 1822.000 M	Level
CH: 1822.000 M	Into section.	1 in 400 Raising.

IB ZONE:

i) TOWARDS SGDM END (DN LINE):

From km	To km	Stretch	Gradient
From section	770.833	---	1 in 155 falling
770.833	768.910	1923M	Level
768.910	768.700	210M	1 in 250 Falling.
768.700	768.550	150M	Level
768.550	767.750	800M	1 in 1000 Falling
767.750	767.550	200M	Level
767.550	Into section	---	1 in 250 falling

ii) TOWARDS SGDM END (UP LINE):

From km	To km	Stretch	Gradient
From section	770.080	---	1 in 155 raising
770.080	769.880	200M	1 in 300 raising.
769.880	768.380	1500M	Level
768.380	767.780	600M	1 in 1000 raising
767.780	767.580	200M	Level
767.580	766.530	1050M	1 in 250 raising
766.530	Into section	---	1 in 400 raising

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY:

S. No	Name of the line	Holding capacities on CSR	Direction of movement
1	Line no-1(UP loop)	701M(STR-SB)	Trains coming from DSI and proceeds towards SGDM are UP trains.
2	Line no-2(UP Main)	714M(STR-SB)	
3	Line no-3(DN main)	769M(STR-SB)	Trains coming from SGDM and proceeds towards DSI are DN trains.
4	Line no-4(common loop)	687M(STR-STR)	

2.5.2 NON RUNNING LINES AND THEIR CAPACITY IN CSR:

S no	Name of the line	Capacity in CSR
1	Ballast siding	453.048M(BJ-BJ)
2	Hot axle siding	40.964M(BJ-DE)
3	Shunting neck	203.61M(DS-DE)

(1) HOT AXLE SIDING:

One Hot Axle siding takes off from Line no.1 at VSKP end of the yard and terminates towards Station side. The siding is isolated by the derailing switch. The entrance point and corresponding derailing switch is coupled and operated by an arc lever provided at site. Hand plunger lock fitted at the entrance point is unlocked by a key (N) released from RKT which is transmitted through control no. 30 from VDU.

(2) BALLAST SIDING:

The Ballast siding length 453.048mts CSL(BJ-BJ) takes OFF from common Loop (Line no-4) at HWH end of the yard and is isolated by derailing switches on both sides. The entrance points and corresponding derailing switches are coupled and operated by arc levers provided at site at either end of the sidings. Hand plunger lock fitted at the entrance points of South and North ends are unlocked by the keys (M1 and M2) released from RKTs which are transmitted through control No. 29 from VDU. When ever the keys are transmitted the UP and DN reception and dispatch signals over common loop will be held locked in their Normal position.

The Ballast siding is isolated from shunting neck by a derailing switch. The DS point is a hand operated point. The DS point shall be locked in its Normal position i.e isolated from Ballast siding and the key shall be under the custody of SM on duty.

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT

NIL

2.6 LEVEL CROSSINGS:

SN	LC Gate No. with Classification and Department	Between stations with Location Km.	Type	Normal position	Whether interlocked	Provision of Telephone
1	ML-434 "C" Class Engg	PDU-DUSI 760/27-29	Lifting barrier	Closed to Road traffic	Non-Interlocked	Provided
2	ML-435 "C" Class Engg	PDU-DUSI 761/29-31	Lifting barrier	Closed to Road traffic	Non-Interlocked	Provided
3.	RV-436 "Spl" Class Engg	Ponduru yard 763/31-33	Lifting barrier	Open to Road traffic	Interlocked	Provided
4.	RV-438 "Spl" Class Engg	PDU-SGDM 766/29-31	Lifting barrier	Open to Road traffic	Interlocked	Provided

3. SYSTEM AND MEANS OF WORKING:

- i) System of working :- 'Absolute Block system'
- ii) Block instruments: - 'SGE type' Double line block instruments are provided for block section PDU-DSI and PDU-SGDM.
- iii) Co-operative/Non Co-operative: Non co-operative
- iv) Provision of Block Telephone attached to Block instruments connecting the adjacent Block stations concerned.
- v) Custody of keys of block instrument: Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer. SM is responsible for operation of the Block instruments.

4. SYSTEM OF SIGNALLING AND INTERLOCKING:

- 4.1**
- a) Standard of Interlocking: This Station is provided with Standard-III(R) Electronic Interlocking.
 - b) Type of signals: Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b).
 - c) The Station is provided with central Electronic Interlocking **(EI)**. All signals and points are electrically operated from the VDU provided at SM's Office.
 - d) Method of operation: VDU is provided in the Station Master's office to electrically control all signals and points.
 - e) Provision of axle counter/Track circuits on running lines:

Track circuits are provided in the yard as 1AT, 1T1, 1T2, 21AT, 21BT, 23T, 12AXT, 14T, 14AT, 23T, 10T, L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, 25BT, 25AT, 24AT, 24BT, 26AT, 26BT, 22AT, 22 BT, 13 AT, 13T, 2T2, 2T1 and 2AT. A pair of Digital axle counter is provided between PDU- SGDM (13AXT) on UP line, one just beyond UP Advanced starter signal No 13 of PDU and another one on 15T track circuit beyond UP IB Home Signal No.15 of PDU. Similarly a pair of Digital axle counter is provided between PDU- SGDM (LVURAXT PDU- SGDM) on UP line, one just beyond UP IB signal No.15 of PDU and another one on 1T₂ track circuit beyond UP Home Signal No. 1 of SGDM.

A pair of Digital axle counter is provided between SGDM-PDU (14AXT) on DN line, one just beyond DN Advanced starter signal No 14 of SGDM and another one on 20T track circuit beyond DN IB Home Signal No.20 of SGDM. Similarly a pair of Digital axle counter is provided between SGDM-PDU (LVDDAXT SGDM-PDU) on DN line, one just beyond DN IB signal No.20 of SGDM and another one on 2T₂ track circuit beyond DN Home Signal No. 2 of PDU.

Axle counters are provided for section PDU- DSI as DN LVV as DAXT of the yard. Normally the VDU is blank except point and Block section indications for the above axle counters are available on VDU at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

- f) Calling on signals: Calling-on signals are provided below Home signals (i.e. in both Up & Down directions) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b).
- g) The operator console cum visual display unit (VDU) is provided for operation of signals, points, LC gates, crank handles, siding & other controls etc.
- h) The VDU is provided with SM's key user name and password which shall always remain with the personal memory of the Station Master on duty.

NOTE: No conventional Operating-cum indication Panel is provided at this station. All operation and Indications shall be carried out through VDU only. The details of operation from VDU is given under APPENDIX-B.

i) CRANK HANDLE: When any point fails to operate normally by the Route Setting operation through VDU, it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual chapter-2, para-2.18 & 2.19.

<u>CRANK HANDLE</u>		<u>CONTROL POINTS</u>
CH-1	----	22
CH-2	----	23.24
CH-3	----	25.26
CH-4	----	21

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when concerned signals are not taken 'OFF' and the route is not locked for whatever reasons. To Transmit or Release control of the Crank Handle, click on the crank handle control button, a pop-up menu will appear. The appearing pop-up menu gives details of the possible commands on the Crank Handle, which are transmit control and Receive control. Crank Handle can be released by clicking the Transmit control. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle. This key can be electrically transmitted at both end locations of the yard for manual operation of the defective points. The failure of motor operated points must be ensured by physical checking that there is no obstruction for the same.

SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 2.19(d) of the operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix-'B').

The cases of failure of motor point should be promptly reported to the concerned signal maintainer/signal SSE/JE for immediate rectification.

When Crank handle operation is resorted to, the concerned counter will be incremented. The same should be recorded in the register provided for with the reason by SM on duty.

EMERGENCY CROSS OVER

- (l) Cross over Point No 21 towards HWH end and cross over Point No 22 towards VSKP end of the yard are provided as emergency cross overs in the yard.
- (m) EMERGENCY POINT OPERATION (BLACK WITH RED DOT):

Emergency point operation facility is provided to operate the point from the VDU in case of failure of point controlling track circuit/Axle Counter.

Before doing the emergency operation, the Emergency Point Operation Key is to be made "KEY IN" by clicking the KEY IN menu. The user name and password is to be logged in. The user name is ECOR and the password of this station is PDU. On clicking the concerned point icon, a pop-up menu is displayed carrying four options: 1) Normal 2) Reverse 3) Emergency Normal 4) Emergency Reverse. For emergency operation of concerned point, drag the pointer to either emergency normal or emergency reverse whichever is desired. A normal or reverse flashing indication will appear and the indication will be steady after the point is set to Normal or reverse, whichever is desired. After the completion of Emergency point operation, the key is to be KEY OUT by clicking KEY OUT menu. The user name and password is to be given for KEY OUT also. This action will be recorded in a counter. All such operations will be registered in the emergency point operation counter Register. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

(n) EMERGENCY ROUTE RELEASE COUNTER:

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

(o) EMERGENCY ROUTE RELEASE INDICATION :

The Electronic interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route.

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), click on the concerned signal. After clicking by the left button on the mouse a pop-up menu will appear as shown above- Click on the cancellation menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect. After doing so click on the route release menu, the route locked indication will start flashing for 120 second. After completion of 120 seconds, the White light along with the White strip of light will disappear suggesting the route has been released. This action will be recorded in a counter. The counter will increment the number for each and every such action. In case route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to release the route and seal the emergency route release button.

Each operation of emergency cancellation of route should be recorded in the emergency route release counter register by registering the next higher number. All such operations and the new number should be recorded in the station diary counter register and in the train signal register.

(p) TRACK CIRCUITS:

Both Up and Down main Lines, Up Loop and Common Loop and all the point zones are track circuited.

In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (91M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals

are also track circuited (i.e. 13AT and 14AT in Up and Down directions respectively). Indications for the above track circuits/Axle Counters are available on VDU at SM's office. White indication on the VDU indicates track clear and Red light indicates track occupied condition.

(q) AXLE COUNTER:

Entire Block Section between PDU-DSI and PDU-SGDM are provided with Digital axle counters.

For SEC: PDU-DSI:-

A pair of Digital axle counter is provided between PDU-DSI (Dn LVV PDU-DSI) on Dn line, one just beyond Dn Advanced starter signal No 14 of PDU and another one on 2T2 track circuit beyond Dn Home Signal No.2 of DSI. Similarly a pair of Digital axle counter is provided between DSI — PDU (Up LW DSI-PDU) on up line, one just beyond Up Advanced starter signal No.13 of DSI and another one on 1T2 track circuit beyond Up Home Signal No1 of PDU.

FOR SEC: PDU-SGDM:-

A pair of Digital axle counter is provided between PDU- SGDM (13AXT) on UP line, one just beyond UP Advanced starter signal No 13 of PDU and another one on 15T track circuit beyond UP IB Home Signal No.15 of PDU. Similarly a pair of Digital axle counter is provided between PDU- SGDM (LVURAXT PDU- SGDM) on UP line, one just beyond UP IB signal No.15 of PDU and another one on 1T₂ track circuit beyond UP Home Signal No. 1 of SGDM.

A pair of Digital axle counter is provided between SGDM-PDU (14AXT) on DN line, one just beyond DN Advanced starter signal No 14 of SGDM and another one on 20T track circuit beyond DN IB Home Signal No.20 of SGDM. Similarly a pair of Digital axle counter is provided between SGDM-PDU (LVDDAXT SGDM-PDU) on DN line, one just beyond DN IB signal No.20 of SGDM and another one on 2T₂ track circuit beyond DN Home Signal No. 2 of PDU.

The position of the Block section whether cleared or occupied are reflected in the VDU provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR.14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block station as after being assured by both the SM that the last vehicle has arrived complete at the receiving station by

exchanging Private Number then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B' under para 5.0 of this SWR).

In the event of failure of Axle Counter/ Track circuit the clearance of loop lines and concerned point zone and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR.3.69 and SR there to.

NOTE:

Before taking off reception and dispatch signals for Up and Down directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track Axle counter will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF.

Relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with the on duty station master and the other key with the signal maintainer. Whenever required the Station Master shall hand over the key to the maintainer with proper acknowledgement on the relay room key register. The maintainer on receipt of the key from the Station Master may use the same and the key in his custody to open the Relay room by inserting the keys one after another separately in to the earmarked locks.

After completion of the work, the Relay room is to be locked using both the keys separately and designated key should be handed over to the Station Master. The details of the transaction is to be properly recorded in the Relay room key register maintained at the station and duly signed by the SM and Maintainer respectively and follow rules laid in Operating Manual 2015, Para no. 13.16

4.3 POWER SUPPLY:

- (i) CLS Power panel with Rotary changeover switch is provided in the Station Master's Office with the three power supplies viz., Up AT, Down. AT and Local, for changing the switch to the required supply position. Luminous indicators are provided above the circuit breaker for each supply to indicate the availability of the supply.
- (ii) Normally the Rotary switch will be kept towards Up AT or Dn AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.
Eg: If power block is to be given on the Up line, Down AT must be available and vice-versa.
- (iii) During the non availability of both the AT supplies SM on duty shall keep the Rotary change over switch towards the Local supply to feed available Local supply to the installation.

Stations and shall be responsible to ensure that there is no undue delay to train operation in general

6.1 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:

The details of Train working operational staff in detail are described in Appendix `1) of this SWR.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT.

SM	1
TPM/TP	1
Traffic gate man	1

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY

The SM on duty is responsible to ascertain the clearance of the nominated line between BSLB/first facing point and advanced starter signal in each direction.

The private number book should be under the custody of SM on duty who is authorized to use it.

6.1.3. ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15 days or more shall sign in the Assurance Register which is taken of having understood the contents. However, in the event of any corrections or modifications in the SWR is involved, the assurance of all the staff who even is entrusted the work of train passing duty shall be obtained afresh in the assurance register by the in-charge of the station before they are allowed to work vide SR 5.01.02.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

The conditions for granting line clear is governed by GR 8.03(1). Before granting a line clear for a train the SM on duty shall ensure that:

- (i) The whole of the last preceding train has arrived.
- (ii) All necessary signals have been put back to ON behind the said train.
- (iii) The line is clear up to BSLB on Dn Line for Dn Trains and up to the outermost facing point No. 21 on Up Line for Up trains.
- (iv) LC gates ML-434 and ML-435 to be kept closed for DN trains.

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN:

--NIL--

6.2.1.1 SAFETY POINT ALARM:

A safety point alarm is provided on the panel board with different indications:

1. On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line.
2. In case of SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.
3. The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.
4. On setting the points against the occupied line, the RED indication will disappear.

If all the lines of a station happen to be blocked, when line clear has been granted to a train, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in case of mishap, the chance of casualties are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by Coaching train, points should be set for a loop line to negotiate with the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on an obstructed line it is necessary that the train are piloted IN on a written authority on Form T/509 given by the SM on duty and delivered by a competent Railway servant to the Loco pilot of the train. Calling-on signal where provided may be taken off.[Refer GR 5.09 & SRs there to].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

-NIL-

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.

-NIL-

6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL.

-NIL-

6.2.1.6 ANY OTHER SPECIAL CONDITIONS:

NIL

6.3 CONDITIONS FOR TAKING "OFF7 APPROACH SIGNALS:-

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.07(4)(5).3.08(4)(b) 3.36, 3.38, 3.40, 4.17 and SR 3.36. 01, 3.36.02, 3.36.04. 3.40.01, 3.40.02, 3.47.01, 4.17.02, and Block Working Manual].

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON"

SM should ensure that signal is put back to ON after passage of the train as per GR 3.36 [2] [b] & SR 3.36.02 [b] [ii].

6.4 SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:

The following simultaneous reception and dispatch facilities are provided at this

1.	Receiving of an Up train on line No.1 (Up loop) set to sand hump	AND	Receiving of a Dn train on line No.3 or 4 (Common loop) set to overrun line. OR Dispatch of another UP train from line no-2.
2.	Receiving of an Up train on line no 4 (common loop) set to sand hump.	AND	Dispatch of UP train from line no-1 & 2.
3.	Receiving of Dn train on line No.4 (Common Loop) set to ORL.	AND	Receiving of an Up train on line no. 1 or 2. AND Dispatch of another DN train from line no-3.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between PDU-DSI and PDU-SGDM on both Up and Down Lines are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on VDU at SM's office. As soon as train enters in to that block section the RED indication appears On VDU. After whole train clears the block section GREEN indication appears on the VDU. This confirms the complete arrival of train and the SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication GREEN on the VDU.

In case of failure of Axle counter the SM on duty shall obtain Complete Arrival Certificate from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until Complete arrival Certificate is received from the station in advance supported by a private number. Train passing on adjacent line shall be stopped and Guard and Loco pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03(b)(vi).

6.6 DESPATCH OF TRAINS:

(a) To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the VDU. He shall suspend all non-isolated shunting and the Station Master will ensure that the Level crossing Gate is closed against road traffic and then shall take "OFF" the concerned route starter and advanced starter signal. The OFF' aspect of the route Starter and Advanced Starter is the authority to proceed into the block section. [Refer GR 3.38, 3.42, SR 3.36.04(b). 3.42.04 and BWM 2.07.5(a)]. The Station

(A.K.SAINI)
DSTE/P/VSKP

(K.SIVA HARSHA)
DOM/WAT

Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the advanced starter complete, he shall send the train entering block section signal to the station in advance. If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The interlocked level crossing gate shall remain closed against road traffic for dispatch of trains. [Refer SR.4.23.02 & 4.25.02].

(b) Issue of caution orders:-

Whenever in consequent of the line being under repairs or for any other reasons special precautions are necessary, a caution order detailing the kilometer and speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Loco pilot in terms of GR 4.09 and ERs thereto.

6.7 TRAINS RUNNING THROUGH:

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until anything wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco pilot and Guard of the train.

He shall also depute the TPM on duty to the other side, for passing the train. The TPM on duty shall wave Green hand signal horizontally. He shall show danger hand signal if he notices anything is wrong and reports the same to the SM on duty.

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.42,4.17 4.42,& SR 4.42.02 (b) (i) ,(ii), (iii),c & (d)]

**6.8 WORKING IN CASE OF FAILURE:
PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING
FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:**

A. TRACK CIRCUITS:

In case of failure of track circuits the clearance of the concerned line should be ensured physically before a train is piloted.

B. AXLE COUNTER:

In case of failure of axle counter in the station yard, the clearance of the concerned line should be ensured physically before a train is piloted.

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para of SWR (APP-B). if the axle counter indication does not appear 'Green & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for rectification.

C. BLOCK INSTRUMENTS

In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 & 6.02.06]

During this period of time the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

D. RECEPTION OF TRAIN ON OBSTRUCTED LINE:

Whenever trains are to be admitted on an obstructed line it is necessary that the trains are piloted IN on a written authority given by the SM on duty and delivered by a competent Railway servant to the Loco pilot of the train. [Refer GR 5.09 & SRs there to].

E. RECEPTION OF A TRAIN ON NON-SIGNALLED LINE

-NIL-

F. SIGNALS:

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impdssible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71. 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

G. INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE: However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Master irrespective of the position of the switches laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)]

Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77]

DEFECTIVE INTERLOCKING

When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03(b) (i)].

I. DEFECTIVE/DAMAGED POINTS

When any point fails to operate normally by the route setting operation through VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become

defective. the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle. For motor operated points shall be followed as per operating manual para-20.06.

6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/ MATERIAL LORRIES ETC.

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM].

- i) Trolleys. Motor Trolleys. Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- iii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection .or following another light motor trolley.

7.0 BLOCKING OF THE LINES:

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement. 'Line Block' is to be activated on VDU by Dy. SS/SM on duty following procedures as laid down in para no. 6.2.2. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01 (a)].

8. SHUNTING:

8.1 General precautions: The rules laid down in GR 3.46, 3.52 to 3.56, 5.13 to 5.23, 8.05(2) (3), 8.06 and 8.14, 8.15 (c) with relevant SRs and OM 7.01, 7.07 and 7.08 shall be observed. All shunt moment shall be supervised by Guard/SS/Dy.SS, point man on duty vide SR 5.13.03 as the case may be.

In the event of any non-signaled movement has taken place, the Dy.S.S/SS. on duty shall ensure physical verification of the clearance of the crossover points.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is governed by GR 8.06.

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY: Hand shunting /Fly shuttling is prohibited at both ends of the yard.

8.4 SHUNTING ON SINGLE LINE: Not applicable.

8.5 SHUNTING ON DOUBLE LINE:

- (i) When the line clear has been given no shunting shall be permitted in the block section in rear Vide GR 8.06 (1).

- (ii) Shunting towards DUSI end between beyond advanced starter it should be ensured that engine should towards falling gradient i.e towards block section.
- (iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back Vide GR 8.06(2) and BWM 5.15[1][b].
- (iv) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward Vide GR 8.06(3) and BWN 5,15[2][b].

8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD:

While performing shunting in the sidings it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines, occupied in shunting. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.

9.0 ABNORMAL CONDITIONS:

(a) THE RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITIONS: (i) PARTIAL FAILURE: -

- i. In the event of suspension of Lock and Block Instrument and during partial failure of other available means of communication, the procedures shall be followed for working of trains in different situations. (Refer BWM 5.16, 5.23 & SR 6.02.06)
- ii. THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT etc:-
Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provision which is summarized as follows. [Refer SR 6.02.05]
- iii. TRAINS DELAYED IN BLOCK SECTIONS
If a train carrying passenger does not arrive within 10 minutes OR if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco pilots and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]
- iv) Failure/passing of Intermediate Block stop signal at 'ON' : NIL
- v) Failure of Axle counter block/BPAC: Procedure to be followed as detailed in para 4.1 (q) (main body)
- vi) Failure of MTRC: NIL

(b) PROCEDURE OF EMERGENCY OPERATION OF POINTS BY CRANK HANDLE:

- (i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points are given in Para No.6.8 I.
- (ii) Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release. [GR 3.39 and GR 3.77]

(c) CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING- ON SIGNAL OPERATION IS INITIATED:—

Before taking off Calling —On signal during failure of track circuit/axle counter, the route and the clearance of the track over which train would pass to be verified by SM/ASM.

(d) REPORTING OF FAILURE OF POINTS, TRACK CIRCUITS/AXLE COUNTER AND INTERLOCKING:-

Whenever there is a failure of points. Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signalling Maintainer for rectification of the fault ,SM should restore the normal working.

The entries in failure registers to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATION: -

- (a) In the event of total failure of communication trains shall be worked in accordance with the provision of SR 6.02.05.
- (b) During partial interruption of communication the rules laid down in SR 6.02.03 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION

During temporary single line working on one clear line when one line is obstructed either between PDU-DSI and PDU-SGDM, trains shall be worked as per the procedure laid down in SR 6.02.01.

9.3 DISPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions of SR 6.02.05.

10. VISIBILITY TEST OBJECT:

The signal lights of starter signal Nos.7 of L/1 for UP and DN directions during day and night are the visibility test objects vide GR 3.61.2(b)(iii).

11. ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E').

12. FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG. FOG SIGNALLING:-

In case of thick, foggy or tempestuous weather impairing visibility. whenever it is necessary to indicate to the Loco pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their acknowledgement in fog signaling Rules.

Fog signal men shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway

12.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

a) This register contains the following parts.

Part - I Particulars of fog signal men posted at the station from time to time.

Part - II Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part - III Periods of fogs, fog signal men on duty and details of detonators used.

Part - IV Particulars of issue and testing of fog signals at the station.

b) In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects

c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so. 13.

APPENDICES :

APPENDIX-A : WORKING OF LEVEL CROSSING GATES

APPENDIX-B : SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.

APPENDIX-C : ANTI COLLISION DEVICE (RAKSHA KAVACH)

APPENDIX-D : DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT

APPENDIX-E : LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION

APPENDIX-F : RULES FOR WORKING OF DK STATIONS, HALTS. IBH. IBS AND OUTLYING SIDINGS

APPENDIX-G : RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS

CERTIFICATE :

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING AMENDING OR MODIFYING ANY GENERAL RULES AND SUBSIDIARY RULES. BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES CANCEL ALL PREVIOUS STATION WORKING.

APPENDIX-‘D’ TO STATION WORKING RULES OF PONDURU STATION.

The following staffs are concerned with the movement of the trains whose duties are given below:

DUTIES TO BE PERFORMED BY THE STAFF AT RAYAGADA STATION.**1) STATION SUPERINTENDENT:**

- i) Station incharge is responsible for the efficient discharge of duties by different members of staff at his station. (General Rules 5.01) and OM Para No. 2.02.
- ii. Ensuring that the general working of the Station is being carried out in strict accordance with the current rules, procedures and instructions.
- iii. Providing prompt and courteous service with utmost safety and security of passengers and employees.
- iv. Availability, helpfulness and good conduct of station porters.
- v. He shall be responsible for general up-keep of the station.
- vi. He shall be responsible for keeping the safety and operating literature including circulars, pamphlets, gazette etc. up to date and these must be explained to the staff working under him and got noted by them.
- vii. He shall maintain complete and up to date record of Engg/S&T/TRD restrictions. He shall be responsible for bringing forward the caution order register every Monday.
- viii. He shall be responsible for maintaining Accident Register and Accident Charts and keeping these up to date.
- ix. He shall maintain figures in respect of the stock and get them relayed to the control in time.
- x. He shall investigate all public complaints and send the extracts of the complaint with explanation of the staff and his own remarks to Divisional Office in time. In case of complaints concerning the other department, intimation may be given to the subordinate In-Charge of that department immediately so that action may be taken to avoid recurrence.

2. SM/ASM

- i) He shall come on duty after taking complete rest and shall not perform his duty under the influence of drugs or intoxicants.
- ii) When on duty or when called upon to do so, in case of emergency, he shall be responsible for obtaining and granting line clear to trains as per SWR & OM Para No. 2.02 (e).
- iii) He shall handle the control panel himself when on duty and shall not permit any unauthorized person to manipulate panel.
- iv) He shall keep the SM's control keys of control panel in his personal custody whenever, he is required to leave his office even for a short duration.
- v) While coming on duty, he shall ensure that all points and signals are in good working order and all the registers, records, pertaining to train passage are completed in all respect before taking over the charge.
- vi) He shall personally ensure that conditions for taking 'off' the reception signals are fulfilled and the clearance of line is verified as per SWR before actually pressing the relevant button for taking off the signals.

- vii) He shall ensure from indications available in the panel that the signals are burning brightly and are giving correct indications.
- viii) He shall ensure that proper indications of points, signals, track circuits, crank handle, level crossing gate etc., are displayed at their proper places.
- ix) He shall ensure that all Shunting operations are carried out as per extant orders and GR 5.19 and SRs thereof.
- x) He shall inform the Technician/JE/SE(sig) in writing or through a written message, any failure of track/signals/points/keys or panels etc. and shall invariably enter these failures in Signals Failure Register.

3. TRAFFIC POINTSMAN/TOKEN PORTERS:

- i) He shall obey all lawful orders of the ASM/SM/SS on duty or official in-charge supervising the shunting during the course of shunting operations including coupling or uncoupling of vehicles, wagons, fixing rubber washers, closing wagon doors, displaying hand signals etc.
- ii) He shall exhibit danger signal to the official supervising the shunting if vehicles are fouled during the shunting operation.
- iii) He shall pilot the trains in case of abnormal working and when ordered by the SS on duty.
- iv) He shall be in proper neat and clean uniform while on duty.
- v) He shall come on duty after taking complete rest and shall not perform duty under the influence of liquor, drugs, or intoxicants.
- vi) Neither shall he absent himself from duty nor shall he exchange his duty without prior permission of his superiors.
- vii) He shall not leave his duty unless properly relieved or authorized by his superiors.
- viii) He shall set the points properly in non-interlocked yard and man them for all shunting movements and shall not interfere with the points while the vehicles are standing and or passing over them.
- ix) He shall be responsible to see that fouling marks are kept clear after completion of shunting.
- x) He shall always commence his duty equipped with hand signal lamps during night and flags during day.
- xi) He shall verify the correct setting of route before delivering required papers to the Loco Pilot either through taking 'OFF' the relevant shunt signal or by personal observation.

4. TRAFFIC GATE MAN:

- i) He shall be responsible for proper operation of the gate as per SWRs for the passage of trains.
- ii) He shall ensure that no train suffers any detention on account of late closing of the gate.
- iii) He shall keep the channels of check-rails clean and shall clean the road within the railway limits and water the area regularly.
- iv) He shall clean the gate lamps and hand signal lamps daily. He shall ensure that the wicks of the burners are trimmed so that these are lighted properly and kept

- burning continuously from sun set to sunrise.
- v) He shall keep the surroundings of his gate lodge clean tidy and neatly planted with shrubs, plants etc.
 - vi) He shall remain alert on duty till properly relieved. If he is required to leave the gate in an emergency he shall close and lock the gate booms against the road traffic before leaving the gate.
 - vii) He shall ensure that the equipment at L-xing are complete and in working orders.
 - viii) He shall produce the public complaint book when required by public for lodging complaint and to the railway officials for inspection.
 - ix) He shall ensure that road traffic is not unnecessarily held up at the gate.
 - x) He shall stand in attention near the gate lodge facing the track and be prepared to repeat any signal which the guard may intend to convey to the loco pilot or show caution or danger signal should anything appear to be wrong with the train itself as it passes.

APPENDIX 'C' TO STATION WORKING RULES OF PODURU STATION

ANTI COLLISION DEVICE [RAKSHA KAVACH]

NIL.

APPENDIX 'E' TO STATION WORKING RULES OF PONDURU STATION**ESSENTIAL EQUIPMENT**

A list of essential equipment's is given below which shall be maintained in good Working order.

Sl. No	Description	Station
1	Detonators	20
2	Hand Signal lamps	3(1 Spare)
3	Hand Signal Flags	3(1 Spare)
4	Clamps with Padlocks	8
5	Safety chains with Pad locks	6
6	Fire & Sand buckets	5
7	Minimax Fire Extinguishers DCPT	2
8	Reminder collars	6
9	First Aid Box	1
10	Stretcher	1
11	Blanket	1
12	Iron skids	2

APPENDIX 'A' TO STATION WORKING RULES OF PONDURU STATION**1. DESCRIPTION OF THE LEVEL CROSSING GATE :**

Following details shall be maintained at all manned level crossing gates:

- | | |
|--|--|
| 1. Number of Level Crossing Gate | : 436 |
| 2. Engineering or Traffic Gate | : Traffic gate-'B' Class |
| 3. Under control of Station Master/Permanent Way inspector | : SS/ PDU |
| 4. Location at KM | : 763/31-33 |
| 5. At Station | : PONDURU |
| 6. In between station | : PDU-DSI |
| 7. BG/MG/NG: | : BG |
| 8. Single line/Double line/Multiple line | : Double Line |
| 9. Normal Position: | : Open to Road Traffic. |
| 10. Inter Locked/Non-Interlocked: | : Interlocked. |
| 11. Means of interlocked | : Electrical key transmission.
By control No.31. |
| 12. Provision of Gate signal at KMs: | 1. Up line. Station Signals
2. Dn line: Station Signals |
| 13. Signaling arrangement | : MACLS. |
| 14. Means of communication-Telephone/Bell etc. | : Telephone connected with PDU Stn |
| 15. Width of level crossing gate | : 7.5 Mtrs. |
| 16. Type of road {NH/SH/Other} | : Others. |
| 17. Name of road | : Station Road of PDU. |
| 18. Metalled/Non-Metalled | : Bituminous |
| 19. Approach road | : Level. |
| 20. Width of the road | : 5.5 Mtrs. |
| 21. Angle of road crossing{In case of the skew gates} | : 90 degrees |
| 22. Road gradients {If any} | : 1.North/East side: Level.
2 South/West side: 1in100. |
| 23. Road alignment {Straight/Curve} | : 1. North/East side: Straight.
2. South/West side: Straight. |
| 24. Provision of height gauge | : Provided. |
| 25. Type of Barriers | : Electrical operated Lifting barrier. |
| 26. Length of Check rail | : 9.5 Mtrs. |
| 27. Road surface in L-Xing gate | : Level CC Block. |
| 28. Length of Rumble strip /speed breakers | : 5.5 Mtrs. |
| 29. Road signs | : Provided |
| 30. Speed breaker indication board | : Provided. |
| 31. TVU | : 96673, 02-2017 |
| 32. Census next due on | : 2020 |
| 33. Demarcation for placement of detonators | : Provided. |
| 34. No. of Gate men working | : 3 ' |
| 35. Nearest Railway Medical Assistance | : Rly. Health Unit /CHE. |
| 36. Nearest Private Medical Assistance {If Any} | : Ponduru. |
| 37. List of equipment available Yes/No | ..Yes. |

1.1 EQUIPMENTS:

SL.No.	ITEMS	REQUIREMENT
1	LED Tri colour hand signal lamps	Two
2	Green hand signal flag	One flag mounted on sticks
3	Red hand signal flag	Two flags mounted on sticks
4	Red banner flag mounted with sticks	SL-2, DL – 2, Multiple line-3
5	Spare chains with padlocks	2 chains with padlocks
6	Stop boards	2 retro reflective stop boards
7	Padlock	One
8	Detonators	Ten in a tin case
9	Tommy bar	One
10	Bucket	One
11	Whistle	One
12	Wall clock	One
13	A small chain for use in case of	Two

1.2 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions In Hindi/English.
2. Gate Working Instructions in Local vernacular language.
3. Gateman Rule Book in Local vernacular language.
4. List for tools and books.
5. Duty registers.
6. Certificate for working as gateman.
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp etc.,
8. Accident Register.
9. Records of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Failure register.

1.3. DUTIES OF GATEMEN:

1. **ALERTNESS:** The gate man shall be alert and be prepared to take immediate action, should danger be apprehended, Keys of the gate shall be in his personal custody.

2. **COMPETENCY:** Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way).

3. POSITION DURING PASSAGE OF TRAINS:

During passage of trains. gate man will stand in the manner indicated below: -

- [i] Gate man will stand attentively in front of the gate-lodge facing the approaching train.

- [ii] In daytime. gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- [iii] In nighttime. gateman shall hold lighted hand signal lamp with white light facing the track.
- [iv] He shall keep the whistle slung around his neck from a cord.

2. ROUTINE DUTIES OF GATEMAN:

- [i] Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- [ii] Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it However, if it is necessary leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- [iv] Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, brake beams, safety bracket. vacuum cylinder or any other situation endangering safe running of trains.
- [v] Gateman shall also be prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- [vi] If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- [vii] In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.
- [viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco pilot report the defect at the next station.
- [ix] Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.
- [x] Gateman shall ensure that he is having competency certificate in his possession while on duty.
- [xi] Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.
- [xii] Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- [xiii] Gateman shall see that the channel for the flange of the wheel is kept clean.
- [xiv] Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- [xv] Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- [xvi] Gateman on electrified section shall watch that road vehicles/animals passing from gate are with-in the height loading gauge provided on either side of the level crossing gate.
- [xvii] Gateman shall prevent tress passing by persons or cattle to the maximum extent.

3. ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

In case gateman observes anything unusual with a passing train, he shall take following action:

- [i] He shall take prompt action to warn the loco pilot/guard of the passing train by showing red flags by day and red light by night.
- [ii] He shall simultaneously try to draw the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- [iii] If loco pilot/guard fails to take notice, gateman shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.
- [iv] In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- Iv] He shall endeavor to attract the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Dn motion as high and as low as possible.
- [vi] In case of trains does not stop, GK shall immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

4. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- [i] In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.
- [ii] Thereafter, if he is unable to remove the obstruction, •gateman shall immediately advice the station master on duty, if connected on telephone, regarding the defects/ obstructions at the gate, under exchange of private number.
- [iii] If there is no response from the station master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

- [i] In the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duty provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.
- [iii] Gateman shall then proceed to protect the gate along with detonators and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mts and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mts from the level crossing gate and place 3 detonators on the 'track 10 Mts apart. Having

thus protected the like, shall return to the level crossing gate picking up the intermediate detonator on his way back.

- [v] Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (4) about and return to the site of obstruction, picking up the intermediate detonator on this way back.
- [vi] Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- [vii] In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.
- [viii] Thereafter he warns the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

B] ON SINGLE LINE SECTION:

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.
- v) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Locopilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

C] OTHER ACTION TAKEN BY GATEMAN:

- [i] At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.

- [ii] If the gate is broken by the road vehicle which is approaching when the list still barrier is down, the gate man shall take immediate action to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- [iii] He shall note down, the particulars of the road vehicle, vehicle number, name of the Locopilot, owner and relay these details to the nearest Station Master or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available

5 ENGINEERING ITEMS.

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and Census of traffic at level crossings.

WORKING INSTRUCTION FOR TRAFFIC LEVEL CROSSING Gate ML-436**1. Mode of Operation:**

Gate shall normally be kept open to road traffic, whenever it is required to close the gate Station Master on duty shall inform the Gateman about the direction and description of the train intended to receive/dispatch. Gateman on duty shall ensure clearance of road traffic, close and lock the gate. Thereafter transmit the control to the Station Master on duty as per the following procedure:

- (a) Red and Green buttons are provided on gate panel for closing and opening of L.0 gate respectively.
- (b) Normally no indication is available on the VDU indicating that the gate control key is out and gate is in open condition.
- (c) The push button 'Red' is pressed till the gate is closed and locked. (d) Key 'Q' is extracted from EKT-1 after gate is closed & locked.
- (e) Key 'Q' thus extracted from EKT-1 is inserted in EKT-2 & transmitted electrically to SM in conjunction with switch 'GS' reversed to take off concerned signals.
- (f) When gate is closed & locked and the key is transmitted, a flashing yellow indication will appear on the VDU seeing which the station Master on duty receives the control by checking on the L.0 gate control (31) icon and select "receive". The flashing white indication will become steady.
- (g) The locked red indication will appear when the gate has locked by any one of the possible signal routes.
- (h) On complete arrival of the train and after the route is released, locked red indication will disappear on VDU.
- (i) Station Master on duty then shall click "Transmit control" (31) for transmitting the key back to gateman for operating the L.0 gate.
- (j) After transmission, the key in indication starts flashing at VDU suggesting that the key is transmitted to LC gate.
- (k) GK extracts key 'Q' from EKT-2 & inserts in EKT-1, the push button 'Green' is pressed till the gate is opened.
- (l) Flashing white indication on VDU will disappear suggesting that the key is taken out of RKT for operation of L.0 gate.
- (m) Switch GS is provided in gate lodge to put back concerned signals to danger in case of emergency.
- (n) In case of input power failure, GK should operate the gate with the help of hand generator unit which is attached to gate panel for closing/opening of L.0 gate. There will be no indications on gate panel for closing/opening of the L.0 gate and hence signals cannot be taken-off.
- (o) In case input power supply is available, but cable/hand generator failed, arrangement for direct mechanical hand cranking is also available individually at the two pedestals. In this case also, no indications on panel are available and hence signals cannot be taken-off.

1.1 WORKING OF SLIDING BOOM BARRIER IN CASE OF BREAKAGE OF NORMAL BOOM OF 'B' CLASS L-XING AT KM 763/31-33 (KL.0 NO 436) :

- a) Sliding boom barrier-1(Gate lodge side) will be rolled across the road in the locking end of the barrier rests on the lock post. Inserting and turning the key-1 (which is chained with sliding barrier-1) releases the lock plunger, then by sliding the lock plunger, sliding barrier gates locked and the releases the key -2.
- b) Similarly sliding boom barrier- 2 (other side of gate lodge) will be rolled across the road till the locking end of the barrier rests on the lock post. Inserting the key-2 (which is released from sliding barrier one) releases the lock plunger, than by sliding the lock plunger, sliding barrier gates locked and the releases the key —Q.
- c) Key 'Q' is inserted in EKT-2 and transmitted electrically to SM in conjunction with switch GS reversed to take off concerned signals.

1.2 EMERGENCY RELEASE OF GATE KEY :

In the event of gate locked (Red) indication persists on SM's panel even after train movement is completed or when it is required to open the gate due to emergency in gate locked condition on panel the following procedure shall be adopted by both station master on duty and gate man..

1. Station Master on duty shall first cancel the signal by signal cancellation control of the relevant signal.
2. Station Master on duty then shall click on the 'Emergency gate release control' in the gate popup menu.
3. The 'Red' locked indication will flash for 120 seconds and after the time has elapsed the 'Red' indication will disappear.
4. Station Master on duty then shall transmit 'Gate Control' by clicking 'Transmit control' (31).
5. The 'Key In' indication (white) starts flashing suggesting the key is transmitted to Gate man.
6. At gate lodge an indication will appear near RKT suggesting that the key can be released from the RKT for opening of the LC gate.
7. Seeing the indication gate man on duty shall extract the key from RKT and operate the gate.
8. On release of key from RKT flashing indication will disappear.

Any failure regarding transmission / extraction of gate key shall be intimated to the S&T officials for proper rectification. Till such time the failure is rectified the Station Master on duty shall pass the trains by P/IN 'or by P/OUT as the case may be.

2) EXCHANGE OF PRIVATE NUMBERS:

- (i) Before taking off reception/departure signals SS/Dy.SS shall inform the gateman, the number, description and direction of the train.
- (ii) The gateman shall close the gate and transfer the key to the Station Master. (iii)The reception/departure signals will then be taken 'OFF'.

- (iv) In order to ensure that road traffic is not held up for a long time, the Station Master must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- (v) If the gate is operated from the cabin itself, SM shall ensure that the gate is closed against road traffic before taking off reception/departure signals.
- (vi) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform the shunting across the gate shall be personally held responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

3. FAILURE OF TELEPHONIC COMMUNICATION:

- [i] When telephonic communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted: Station Master on duty shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- [ii] Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master which will enable to take 'OFF' reception/departure signals.
- [iii] When sufficient time is not available because of greater frequency of train service, Station Master will issue written authority to the train loco pilot to pass the signal at 'ON' position.
- [iv] In addition, Station Master also issues a caution order advising the loco pilot to whistle continuously and approach the gate cautiously.
- [v] The train loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2)(b).
- [vi] In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- [vii] The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- [viii] He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- [ix] Normal working will be resumed only after staff rectifies the telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS:

- [i] When the gate cannot be closed due to failure of Electrical operation of lifting barriers or sliding boom barriers the gateman will immediately inform the Station Master on duty, under exchange of private number, ensure the lifting barrier or sliding boom barriers do not foul the track.
- [ii] He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- [iii] Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- [iv] After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the Loco pilot of the approaching train.

- [v] Station Master on duty shall issue a caution order to the Loco pilot of a departing train.
- [vi] He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before dispatching a train in the block section from his end.
- [vii] Station Master will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest
- [viii] Normal working will be resumed only after the maintenance staff repairs the barrier or sliding boom barriers to repair the defect at the earliest.

Note:

- [a] In case of failure of lifting barriers worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety chains and padlocks.
- [b] Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco pilot of both departing and arriving train.

5. FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CAN NOT BE EXTRACTED FOR OPENING THE GATE:

- [i] If the gate key cannot be extracted from EKT-2. then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- [ii] If emergency key is available at the gate lodge/cabin. Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic. Emergency key not provided at this gate.
- [iii] The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons- Not applicable to this gate.
- [iv] Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocking gates should be adopted.
- [v] Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- [vi] He shall also advise the Station Master at the dispatching end. under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end
- [vii] Station Master will advise S&T staff responsible for maintenance of key transmitter to rectify the defect at the earliest.
- [viii] Normal working will be resumed only after S&T staff repairs the key transmitter and issue reconnection/fit memo for the same.
- [ix] After rectification. the Emergency key shall be replaced in the Emergency key Box and resealed by the S&T maintainer.

6. FAILURE OF THE GATE KEY WITH THE GATE IN OPEN CONDITION:

- [i] If the gate key cannot be extracted from EKT-1 then gateman must immediately inform the Station Master on duty on telephone. under exchange of private number.

- [ii] Thereafter, the gate must be treated as non-interlocked and procedure for
- [iii] He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- [iv] Station Master will advise S&T staff responsible for maintenance of key transmitter to rectify the defect at the earliest.
- [v] Normal working will be resumed only after S&T staff repairs the winch key transmitter and issue reconnection/fit memo for the same.
- [vi] After rectification, the Emergency key shall be replaced in the Emergency key Box and resealed by the S&T maintainer.

7. OBSTRUCTION AT THE GATE:

- [i] If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gates, for this purpose.
- [ii] Immediately after this, the gate man shall advise the Station Master on duty, regarding the defects/obstructions at the gate under exchange of private number.
- [iii] Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken OFF for a train.
- [iv] If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- [v] Gate man shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General instructions for duties of Gateman under item no.1 5(5).
- [vi] Thereafter he shall protect the gate from the other direction also.
- [vii] He shall note down the particulars of the road vehicle, name of the vehicle locopilot, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- [viii] The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstructions.
- [ix] After the track has been cleared of all obstructions the gate man shall inform the Station Master accordingly, under exchange of private number.
- [x] Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- [xi] Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- [xii] Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- [xiii] Normal working will be resumed only after maintenance staff rectifies the defective lifting barriers and issue reconnection/fit memo for the same.

8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gate man and Station Master will adopt the procedure given under itemNo.7 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

(A.K.SAINI)
DSTE/P/VSKP

(K.V.V.NARASIMHA RAO)
Sr.DEN (East)/WAT

(K.SIVA HARSHA)
DOM/WAT

APPENDIX 'A' TO STATION WORKING RULES OF PONDURU STATION**1. GENERAL****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE :**

Following details shall be maintained at all manned level crossing gates:

1.	Number of Level Crossing Gate:	438
2.	Engineering or Traffic Gate:	Engg gate-“Spl” Class
3.	Under control of Station Master/Permanent Way inspector:	SSE[P]/CHE
4.	Location at KM:	766/27-29
5.	At Station	---
6.	In between station	PDU-SGDM
7.	BG/MG/NG:	BG
8.	Signal line/Double line/Multiple line	Double Line
9.	Normal Position:	Open to Road Traffic.
10.	Inter Locked/Non-Interlocked:	Interlocked.
11.	Means of interlocked:	Key transmission to Gate panel
12.	Provision of Gate signal at KMs:	1) Up line: 766/23-25 2) Dn line: 767/2-4
13.	Signaling arrangement:	MACLS
14.	Means of communication-Telephone/Bell etc:	PDU Station.
15.	Width of level crossing gate:	11 Mtrs.
16.	Type of road {NH/SH/Other}:	SH
17.	Name of road:	Rajam road
18.	Metaled/Non-Metaled:	Metalled
19.	Approach road:	Metalled
20.	Width of the road:	7.0 Mtrs.
21.	Angle of road crossing {In case of the skew gates}:	90 degrees
22.	Road gradients {If any}:	1. North/East side: Level 2. South/West side: LLevel
23.	Road alignment {Straight/Curve}:	Straight.
24.	Provision of height gauge:	Provided.
25.	Type of Barriers:	Lifting barrier.
26.	Length of check rail:	13 Mtrs.
27.	Road surface in L-Xing gate:	Level CC Blocks.
28.	Length of Rumble strip /speed breakers:	7.0 Mtrs.
29.	Road signs:	Provided.
30.	Speed breaker indication board:	Provided.
31.	TVU	319811 of 02/2017
32.	Census next due on:	2020
33.	Demarcation for placement of detonators:	Provided.
34.	No. of Gate men working :	Three
35.	Nearest Railway Medical Assistance:	Rly. Health Unit/CHE

36. Nearest Private Medical Assistance {If Any}: PDU

37. List of equipment available Yes/No..... Yes.

1.1 EQUIPMENTS:

SL.No.	ITEMS	REQUIREMENT
1	LED Tri colour hand signal lamps	Two
2	Green hand signal flag	One flag mounted on sticks
3	Red hand signal flag	Two flags mounted on sticks
4	Red banner flag mounted with sticks	SL-2, DL – 2, Multiple line-3
5	Spare chains with padlocks	2 chains with padlocks
6	Stop boards	2 retro reflective stop boards
7	Padlock	One
8	Detonators	Ten in a tin case
9	Tommy bar	One
10	Bucket	One
11	Whistle	One
12	Wall clock	One
13	A small chain for use in case of	Two

1.2 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions In Hindi/English.
2. Gate Working Instructions in Local vernacular language.
3. Gateman Rule Book in Local vernacular language.
4. List for tools and books.
5. Duty registers.
6. Certificate for working as gateman.
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp etc.,
8. Accident Register.
9. Records of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Failure register.

1.3 DUTIES OF GATEMEN:**[1] ALERTNESS:**

The gate man shall be alert and be prepared to take immediate action, should danger be apprehended, Keys of the gate shall be in his personal custody.

[2] COMPETENCY:

Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way).

[3] POSITION DURING PASSAGE OF TRAINS:

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(K.SIVA HARSHA)
DOM/WAT

During passage of trains, gate man will stand in the manner indicated below: -[i]
Gate man will stand attentively in front of the gate-lodge facing the approaching train.

- [iii] In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- [iii] In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- [iv] He shall keep the whistle slung around his neck from a cord.

[3] ROUTINE DUTIES OF GATEMAN:

- [i] Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunshine.
- [ii] Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- [iii] Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- [iv] Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- [v] Gateman shall also be prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- [vi] If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- [vii] In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.
- [viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco pilot report the defect at the next station.
- ix] Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- [x] Gateman shall ensure that he is having competency certificate in his possession while on duty.
- [xij] Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.
- [xii] Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- [xiii] Gateman shall see that the channel for the flange of the wheel is kept clean.
- [xiv] Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

- [xv] Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- [xvi] Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- [xvii] Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4.ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

In case gateman observes anything unusual with a passing train, he shall take following action:

- [i] He shall take prompt action to warn the loco pilot/guard of the passing train by showing red flags by day and red light by night.
- [ii] He shall simultaneously try to draw the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- [iii] If loco pilot/guard fails to take notice, gateman shall not stop immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.
- [iv] In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.
- [v] He shall endeavor to attract the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Dn motion as high and as low as possible.
- [vi] In case of trains does not stop, gate shall immediately inform the station master, if connected on telephone, to take appropriate action sunder exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- [i] In case of an obstructions at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.
- [ii] Thereafter, if he is unable to remove the obstructions, gateman shall immediately advise the station master on duty, if connected on telephone. regarding the defects/ obstructions at the gate, under exchange of private number.
- [iii] If there is no response from the station master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

- [i] In the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duty provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.
- [iii] Gateman shall then proceed to protect the gate along with detonators and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one

detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line shall return to the level crossing gate picking up the intermediate detonator on his way back.

- [iv] There after he shall proceed on the other line. showing red hand signal, similarly place the detonators as described in Para (4) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

B] On single line section:

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Locopilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

C] OTHER ACTION TAKEN BY GATEMAN:

- [i] At night gate man shall light two hand signal lamps and take action to exhibit light and protect the lines as per described in sub para [A] above.
- [ii] If the gate is broken by the road vehicle which is fouling by track, or if lifting barrier or any other part of the gate found on the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.

- [iii] He shall note down, the particulars of the road vehicle, vehicle number, name of the Locopilot, owner and relay these details to the nearest Station Master or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

6 ENGINEERING ITEMS.

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and Census of traffic at level crossings.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE
ML-438**

(General instructions are common for all type of Manned Level Crossing)

1. Mode of operation:

Gate shall normally kept open to the road traffic. Whenever it is required to close the gate SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive or dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate. There after he will perform the following procedure to take off the Gate home signals as the case may be.

- [i] Key 'G' is obtained after closing the level crossing gate releases '1 GF'..
- [ii] '1 GF' when reversed locks the level crossing boom and releases Key 'G1'
- [iii] Key 'G1' then inserted in to the RKT and turned. Key 'IN' contact of RKT and along with the reverse of switches 1S and 2S clears Up Gate Home and Dn Gate Homes respectively.

Miniature signal indications are provided on the gate operation Panel to indicate the aspect of Gate Home and Distant signals.

2. Exchange Of Private Number:

- (i) Immediately after departure of the train, station master shall inform the gateman through telephone connected at his end, the number, description and direction and expected time of passage of the train at the gate.
- (ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the station master to the gateman as soon as he receives the train entering section advice from the dispatching station.
- (iii) If the actual running time of the train from either end of the section is less than 10 minutes, station master will convey this advice to the gateman before obtaining/granting line clear.
- (iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to the road traffic.

3. Failure of Telephonic Communication :

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted.

- [i] Station Master on duty shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- [ii] Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master which will enable to take 'OFF' reception/departure signals.
- [iii] When sufficient time is not available because of greater frequency of train service, Station Master will issue written authority to the train loco pilot to pass the signal at 'ON' position.
- [iv] In addition, Station Master also issues a caution order advising the loco pilot to whistle continuously and approach the gate cautiously.
- [v] The train loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to

stop short of the gate and ensure that gate is closed following GR 3.73 (2)(b).

Having returned to the gate he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.

In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go. Thereafter, he shall warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

- [vi] In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- [vii] The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- [viii] He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- [ix] Normal working will be resumed only after staff rectifies the telephone and issue reconnection/fit memo for the same.
- [x] SS/Dy.SS will also advise the gateman through Gang man/Patrolman /Loco pilot of the first train that the telephone has become defective.
- [xi] SS/Dy.SS should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- [xii] Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection /fit memo for the same.

4. Failure of Lifting Barriers :

- [1] When the gate cannot be closed due to failure of lifting barriers, the gate man shall Immediately Inform the SS/Dy.SS on duty under exchange of private number and ensure that lifting barriers do not foul the track.
- [ii] He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then to the other end.
- [iii] Gateman shall secure the gate against road traffic by means of safety chains and padlock.
- [iv] After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- [v] SS/Dy.SS on duty shall issue caution order to the loco pilot of a departing train.
- [vi] He shall also advise the SS/Dy.SS at the dispatching end, under exchange of private number, to issue a caution order to the loco pilot to that effect before dispatching the train in to the block section.
- [vii] Station Master shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- [viii] Normal working will be resumed only after maintenance staff repair the lifting barrier and issues reconnection /fit memo for the same.

5. Failure of Gate Key with the gate in closed position ,when Gate Key cannot be extracted for Opening the gate:

- [i] If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gate man must immediately inform the SS/Dy.SS on duty on telephone, under exchange of private number.
- [ii] If Emergency Key is available at the gate lodge, gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.-No Emergency Key provided.
- [iii] The record of the date and time of breaking the sealed cover of emergency key box shall be recorded and signed with reasons.-Not applicable
- [iv] Thereafter, the gate must be treated as non-interlocked and produced for reception / Dispatch of trains as prescribed for non-inter locked gates, should be adopted. .SS/Dy.SS on duty shall issue caution order to the loco pilot before dispatching a
- [vi] He shall also advise the Station Master at the dispatching end. exchange of private number, to similarly issue caution order the loco pilot before dispatching a train in block section for his end.
- [vii] SS/Dy.SS shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- [viii] Normal working will be resumed only after S&T staff repair the key transmitter and issue re-communication / fit memo for the same.

6. Failure of the Gate Key with the gate in open condition:

- [i] The gate key cannot be extracted from the which, gate signal level or key transmitter then gateman must immediately inform the SS/Dy.SS on duty on telephone, under exchange of private number.
- [ii] Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch of train as prescribed for non-interlocked gates, should be adopted.
- [iii] The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- [iv] SS/.Dy. SS on duty shall issue a caution order to loco pilot of a departing train.
- [v] He shall also advise the SS/Dy.SS at the dispatching end, under exchange of private number, to issues a caution order to the loco pilot before dispatching a train in the block section from his end.
- [vi] SS/Dy.SS shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- [vii]. After rectification the, Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

- [i] The gate man shall treat the gate signal as defective and must not take-of them under following circumstances:
 - [a] If gate signal can be taken OFF' without closing the gate, or
 - [b] The key can be extracted from the operating winch when the gate is in open condition, or
- [c] The key can be extracted from the lifting barrier gates when the gate is in open condition.
- [ii] If the gate or the gate signal/distant signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position.

- [iii] The gate man will immediately advise the SS/Dy.SS on duty, under exchange of private number regarding defective gate signals.
- [iv] Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch as prescribed for non-interlocked gates should be adopted.
- [v] He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- [vi] SS/Dy.SS on duty will issue a caution order to the loco pilot of a departing train. He shall also advise the station Master at the dispatching end, under exchange of Private number, and issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- [vii] SS/Dy.SS shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- [viii] Normal working will be resumed only after S&T staff rectifies the defective gate signal and issue reconnection /fit memo for the same

8. Obstruction at the Gate:

- [i] If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any order obstruction at the gate, the gate man shall immediately put back gate signals to 'ON' position.
- [ii] He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- [iii] Immediately after this, the gateman shall advise the SS/Dy.SS on duty regarding the defects /obstruction at the gate, under exchange of private number.
- [iv] If there is no response from the SS/Dy.SS after to or three attempts, he shall first protect the gate and then inform the phone.
- [v] Gateman shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General instructions for duties of gateman under item no.1.5(5).
- [vi] Thereafter he shall protect the gate from the other direction also
- [vii] He shall note down the particulars of the road vehicle, name of the Locopilot, owner and relay these details to the SS/Dy.SS who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- [viii] The SS/Dy.SS shall also inform the SS/Dy.SS at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstructions.
- [ix] After the track has been cleared of all obstructions the gateman shall inform to the SS/Dy.SS accordingly, under exchange of private number.
- [x] SS/Dy.SS shall then issue a caution order to loco pilot of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstructed.
- [xi] Gateman shall secure the gate against road traffic the means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstruction.
- [xii] SS/Dy.SS shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

[xiii] Normally working will be resumed only. After maintenance staff rectifies the defective lifting barriers and issue reconnection /fit memo for the same.

9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of the tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the level crossing gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

APPENDIX 'A'
TO STATION WORKING RULES OF PONDURU STATION
DESCRIPTION OF THE LEVEL CROSSING GATE :

Following details shall be maintained at all manned level crossing gates:

1.	Number of Level Crossing Gate:	434
2.	Engineering or Traffic Gate:	Engg gate 'C' class
3.	Under control of Station Master/Permanent Way inspector:	SSE[P]/CHE
4.	Location at KM:	760/21-23(760.632)
5.	At Station	---
6.	In between station	DUSI-PDU
7.	BG/MG/NG:	BG
8.	Signal line/Double line/Multiple line	Double Line
9.	Normal Position:	Closed to Road Traffic.
10.	Inter Locked/Non-Interlocked:	Non- Interlocked.
11.	Means of interlocked:	Non- Interlocked
12.	Provision of Gate signal at KMs:	-
13.	Signaling arrangement:	MACLS
14.	Means of communication-Telephone/Bell etc:	PDU Station.
15.	Width of level crossing gate:	7.50 Mtrs.
16.	Type of road {NH/SH/Other}:	Other
17.	Name of road:	Village
18.	Metaled/Non-Metaled:	Non-Metalled
19.	Approach road:	Non-Metalled
20.	Width of the road:	5.50 Mtrs.
21.	Angle of road crossing {In case of the skew gates}:	90 degrees.
22.	Road gradients {If any}:	1. North/East side: Level 2. South/West side: Level
23.	Road alignment {Straight/Curve}:	1. North/East side: Curve 2. South/West side: Curve
24.	Provision of height gauge:	Provided.
25.	Type of Barriers:	9.5 Mtrs.
27.	Road surface in L-Xing gate:	Level CC Blocks.
28.	Length of Rumble strip /speed breakers:	5.5 Mtrs.
29.	Road signs:	Provided.
30.	Speed breaker indication board:	Provided.
31.	TVU.	4700, 01/2016
32.	Census next due on:	2019
33.	Demarcation for placement of detonators:	Provided.
34.	No. of Gate men working :	Two
35.	Nearest Railway Medical Assistance:	Rly. Health Unit/CHE
36.	Nearest Private Medical Assistance {If Any}:	CHE
37.	List of equipment available Yes/No.	Yes

Appendix 'A' TO STATION WORKING RULES OF PONDURU STATION**1. GENERAL****1.2 DESCRIPTION OF THE LEVEL CROSSING GATE :**

Following details shall be maintained at all manned level crossing gates:

1.	Number of Level Crossing Gate:	435
2.	Engineering or Traffic Gate:	Engg gate- 'C' class
3.	Under control of Station Master/Permanent Way inspector:	SSE[P]/CHE
4.	Location at KM:	761/29-31(761.918)
5.	At Station	---
6.	In between station	DUSI - PDU
7.	BG/MG/NG:	BG
8.	Signal line/Double line/Multiple line	Double Line
9.	Normal Position:	Closed to Road Traffic.
10.	Inter Locked/Non-Interlocked:	Non- Interlocked.
11.	Means of interlocked:	Non- Interlocked
12.	Provision of Gate signal at KMs:	-
13.	Signaling arrangement:	-
14.	Means of communication-Telephone/Bell etc	PDU Station.
15.	Width of level crossing gate:	7.50 Mtrs.
16.	Type of road {NH/SH/Other}:	Other
17.	Name of road:	Village
18.	Metaled/Non-Metaled:	Non-Metalled
19.	Approach road:	Non-Metalled
20.	Width of the road:	5.50 Mtrs.
21.	Angle of road crossing {In case of the skew gates}:	90 degrees
22.	Road gradients {If any}:	1. North/East side: Level 2. South/West side: Level
23.	Road alignment {Straight/Curve}:	1. North/East side: Straight 1. South/West side: Straight
24.	Provision of height gauge:	Provided.
25.	Type of Barriers:	Lifting barrier.
26.	Length of check rail:	9.5 Mtrs.
27.	Road surface in L-Xing gate:	Level CC Blocks.
28.	Length of Rumble strip /speed breakers:	5.5 Mtrs.
29.	Road signs:	Provided.
30.	Speed breaker indication board:	Provided.
31.	TVU.	1059/01-2016
32.	Census next due on:	01-2019
33.	Demarcation for placement of detonators:	Provided.
34.	No. of Gate men working :	Two
35.	Nearest Railway Medical Assistance:	Rly. Health Unit/CHE
36.	Nearest Private Medical Assistance {If Any}:	CHE
37.	List of equipment available Yes/No.	Yes.

(A.K.SAINI)
DSTE/P/VSKP

(K.V.V.NARASIMHA RAO)
Sr.DEN (East)/WAT

(K.SIVA HARSHA)
DOM/WAT

1.2 EQUIPMENTS:

ITEMS	QUANTITY/NUMBERS
1. LED Tri colour hand signal lamps	2Nos.
2. Hand Signal Flag Green.	1 No with mounted stick
3. Hand Signal Flag Red.	6 Nos.
4. Banner Flag Red.	5Nos.
5. Posts for exhibiting red banner flag	4.Nos
6 Spare chains with padlocks	2 with stop marker
7. Detonators	10 in each case
8. Gate lamps	2 Nos.
9. Tommy Bar	1 No
10. Mortar Pan	1No•
11. Spade/Fowarh	1 No
12. Rammer	1No
13. Pick Axe	1No [in case of asphalted road this
14. Tin case for flags	1No
15. Can for Oil	1 No
16. Water Pot/Bucket	1No
17. Canister for Muster Roll	1 No
18. Set of spare spectacles of gate man	1 No
19. Board demarcation protection of level	1No
20. Bucket	1No
21. Whistle	1No
22. Wall Clock	1 No
23. A small chain in case of failure of gate	2 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions In Hindi/English.
2. Gate Working Instructions in Local vernacular language.
3. Gateman Rule Book in Local vernacular language.
4. List for tools and books.
5. Duty registers.
6. Certificate for working as gateman.
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/ refresher course, safety camp etc.
8. Accident Register.
9. Records of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

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2. DUTIES OF GATEMEN:

- [i] **ALERTNESS :** The gate man shall be alert and be prepared to take immediate action, should danger be apprehended, Keys of the gate shall be in his personal custody.
- [ii] **COMPETENCY:** Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way).
- [ii] **POSITION DURING PASSAGE OF TRAINS**
During passage of trains, gate man will stand in the manner indicated below: -
 - [i] Gate man will stand attentively in front of the gate-lodge facing the approaching train.
 - [ii] In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
 - [iii] In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
 - [iv] He shall keep the whistle slung around his neck from a cord.

3.1 ROUTINE DUTIES_OF GATEMAN:

- [i] Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- [ii] Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- [iii] Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- [iv] Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- [v] Gateman shall also be prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- [vi] If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- [vii] In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary .
- [viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco pilot to report the defect at the next station.
- [ix] Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- [x] Gateman shall ensure that he is having competency certificate in his possession while on duty. Gateman shall work the gate as per gate working instructions and

remain well conversant with this instruction.

- [xii] Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- [xiii] Gateman shall see that the channel for the flange of the wheel is kept clean.
- [xiv] Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- [xv] Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- [xvi] Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- [xvii] Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

In case gateman observes anything unusual with a passing train, he shall take following action:

- [i] He shall take prompt action to warn the loco pilot/guard of the passing train by showing red flags by day and red light by night.
- [ii] He shall simultaneously try to draw the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- [iii] If loco pilot/guard fails to take notice, gateman shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.
- [iv] In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting
- [v] He shall endeavor to attract the attention of the loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Dn motion as high and as low as possible.
- [vi] In case of trains does not stop, GK shall immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- [i] In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.
- [ii] Thereafter, if he is unable to remove the obstruction, gateman shall immediately advice the station master man on duty, if connected on telephone, regarding the defects/ obstruction at the gate, under exchange of private number.
- [iii] If there is no response from the station master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:

A) ON DOUBLE LINE SECTION:

- [i] In the both lines are obstructed The Gateman shall plant a red banner flag by day

and the red light by night 5 meters away on posts duly provided for the purpose.

He shall first protect the line on which a train is expected to arrive first.

- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.
- [iii] Gateman shall then proceed to protect the gate along with detonators and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line shall return to the level crossing gate picking up the intermediate detonator on his way back.
- [v] Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (4) above and return to the site of obstruction, picking up the intermediate detonator on his way back
- [vi] Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- [vii] In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.
- [viii] Thereafter, he shall warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

B On single line section:

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the locopilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

[C] OTHER ACTION TAKEN BY GATEMAN:

- [i] At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.
- [ii] If the gate is broken by the road vehicle which is fouling by track, or if lifting barrier or any other part of the gate found on the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.
- [iii] He shall note down, the particulars of the road vehicle, vehicle number, name of the locopilot, owner and relay these details to the nearest Station Master or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

6 ENGINEERING ITEMS.

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and Census of traffic at level crossings.

**WORKING INSTRUCTION FOR ENGINEERING LEVEL CROSSING GATES,
NON-- INTERLOCKED, ML-434 and ML-435"**

(General instruction is common for all types of Manned Level Crossing Gate)

1. Detailed mode of operation for opening and closing the level crossing gate is as follows:

2. EXCHANGE OF PRIVATE NUMBER :

- i) The normal position of the level crossing gate being "closed to Road Traffic", it should always be in closed condition against road traffic except when, it is opened for passage of road traffic over the level crossing subject to condition prescribed below:
- ii) The Station Master before permitting each train to enter into the block section shall ask gateman on the telephone by giving private number whether, the gate is closed against road traffic for the passage of the train. The gateman only after ensuring that the gate is actually closed and locked against road traffic, shall give a private number to the Station Master in assurance of gate being closed and locked against road traffic.
- iii) The Station Master shall not permit any train to enter into the block section unless he is assured of the closure and /locking of the gate by gateman supported by a private number.
- iv) When the gateman desires to open the gate for passage of roads traffic, he should ensure that-
 - 3) He has not exchanged any private number with the station as per (d)(ii) above, or
 - 4) If he has exchanged private number with the Station Master, the whole of the train with the last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on adjacent line(s)

Before opening the gate for road traffic, he shall display a banner flag/danger signal at either side of the track at a distance of 5mtrs away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready in his hand to stop approaching train, if any.

- v) In case the gateman is not responding on telephone or in case the telephone becomes defective or private number is not received from the gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04 below.
- vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall lookout in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and hand signal lamp with the red light during night, 5mtrs. away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand stop approaching train. if any.

1. FAILURE OF TELEPHONE COMMUNICATION:

When Telephone communication fails or it does not get any response from the gate man despite 2 or 3 attempts, the following procedure should be adopted.

- [i]. Station Master at the dispatching end shall issue caution order to the loco pilot of the departing train.
- [ii] The caution order shall advise the loco pilot to whistle continuously and approach the gate cautiously.
- [iii] The loco pilot shall be instructed to pass the gate cautiously, on being hand signal by the gate man. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his assistant loco pilot to see the condition of the gate. If the gate is closed, the Asst. Loco pilot will give the alright signal and if the gate is not closed he Asst. loco pilot must close the gate and then give alright signal. In the absence of the Asst. Loco pilot, the loco pilot may take the assistance of Asst. Guard/Guard.
- [iv] In case of an approaching train, the SM shall advise the SM at the dispatching end, under exchange of private number, that the Telephone at the gate has failed.
- [v] The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- [vi] Station Master shall also advise the gate man through gang man/Petrol man or the loco pilot of the first train that the Telephone has become defective.
- [vii] He shall also advise S&T staff responsible for maintenance of the Telephone to rectify the same at the earliest.
- [viii] Normal working will be resumed only after S&T staff rectify the Telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS:

- I] When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the Station Master on duty under exchange of private number and ensure that lifting barriers do not foul the track.
- II] He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- III] Gate man shall secure the gate against road traffic by means of safety chains and pad locks.
- IV] After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train
- V] Station Master on duty shall Issue caution order to the loco pilot of a departing train.
- VI] He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the loco pilot before dispatching a train in the block section.
- VII] Station Master shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- VIII] Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / If memo for the same.

5. OBSTRUCTION AT THE GATE:

- I] If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- II] He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- III] Immediately after this, the gateman shall advise the Station Master on duty regarding the defects/obstructions at the gate under exchange of private number by night in the direction of approaching train and protect the gate as stipulated in General instructions for duties of gateman under item No.1.5 [5].
- VI] Thereafter he shall protect the gate from the other direction also.
- VII] He shall note down the particulars of the road vehicle, name of the Locopilot owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- VIII] The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstructions.
- IX] After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- X] Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, If the gate is broken, but is clear .of any obstruction.
- XI] Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- XII] Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- XIII] Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and station master will adopt the procedure given under item no.7 above, if the obstruction fouls the level crossing gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

APPENDIX 'B'

APPENDIX 'B' TO STATION WORKING RULES OF PONDURU STATION

DETAIL DESCRIPTION OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND IN EMERGENCIES ETC. INCLUDING POWER SUPPLY ARRANGEMENTS.

1 BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS:

This is a 'B' class station provided with Standard –III(R) interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signaling gears. The Station is equipped with Multiple Aspect Colour Light Signaling. All points and Signals etc. are power operated through a central **Visual Display Unit (VDU)** with a standby installed in the SS/SM Office.

2.0 DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) is provided for operation of Signals, Points, L.C Gates, Crank Handles, Siding & other controls etc. A Mimic yard diagram based on SI plan no. SI/23008 Alt'I' will be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the Station yard mimic diagram of VDU will be dynamically updated.

2.1 SYSTEM OVERVIEW:

An Operator Console consisting of a VDU (a high-resolution 42" colour monitor), with keyboard and pointing device (mouse) connected with a computer (CPU) is provided. The CPU is connected to the Electronic Interlocking (E.I) equipment to exchange control and indication messages. The system is programmed to display the Station Yard Mimic VDU diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen. A function (clearance of Signal or cancellation, Route release, Point operation, Gate release etc.) can be executed through selecting the required operation by clicking the Left button of the pointing device (mouse) on the desired function.

2.2 An additional VDU connected with a computer is provided as stand by arrangement in case of failure of the working operator console. In case of failure of the working operator console the system shall switch over to the stand by VDU automatically.

2.3 ICONS AND INDICATIONS PROVIDED ON THE VDU

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, L.C.Gates, sidings as indicated in the WRD, various other ICONS and

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indications have been provided on the VDU. A brief description of the same are described below.

SL. NO.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1	SS/SM Key	Yellow light when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release - UP & DN	Flashing indication appears when Emergency route release operation is initiated.	
3.	---	Emergency Gate release	Flashing indication appears when Emergency gate release operation is initiated.	
4.	Emergency Point operation key	Yellow light when key is 'IN'	Ensures emergency point operation by authorized person	For each operation concerned counter shall register one count higher.
5.	---	System indication Central – On/Off	Indicates System 'A' or 'B' is in working mode	
6.	---	System indication End – On/Off	Indicates End system is in working mode or not	
7.	Point failure Ack. Option/ Menu	Yellow	Flashing indication appears when any point fails. SS/SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. After verification at site inform S&T staff Immediately.
8.	Signal failure Ack. Display option/ Menu	Yellow	Flashing indication appears when any signal fails. SS/SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. Inform S&T staff Immediately.
9.	CH-1, CH2 and CH3 button	Yellow lamp indicates 'KEY IN'. Red lamp indicates ' CH	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red	

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		LOCKED'	indication will glow.	
10.	DN Reset key and button (PDU end)	Yellow-Power on Green-prep reset	SS/SM has to follow 'Key In' procedure followed by left click on the button icon to reset LVCD Axle counter.	This operation is required for Resetting of LVCD Axle Counter of Concerned Section. For each operation concerned counter shall register one count higher.
11.	UP Reset key and button (PDU end)	Yellow-Power on Green-prep reset		
12.	DN Reset key and button (CHE end)	Yellow-Power on Green-prep reset		
13.	UP Reset key and button (CHE end)	Yellow-Power on Green-prep reset		
14.	UP Block release button	Yellow –Prepared for Block release.	On getting indication SS/SM shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
15.	DN Block release button	Yellow –Prepared for Block release.		
16.	L.C.Gate control-31 buttons	Yellow lamp indicates 'Gate Closed'. Red lamp indicates 'Gate LOCKED'.	SS/SM shall right click on the button icon to select menu to Transmit / Receive/ emergency operation of gate as required.	In case of emergency operation 'Emergency gate release' indication will appear. For each operation concerned counter shall register one count higher.
17.	Sdg Control-	Yellow lamp indicates 'KEY	SS/SM shall right click on the button icon to select	

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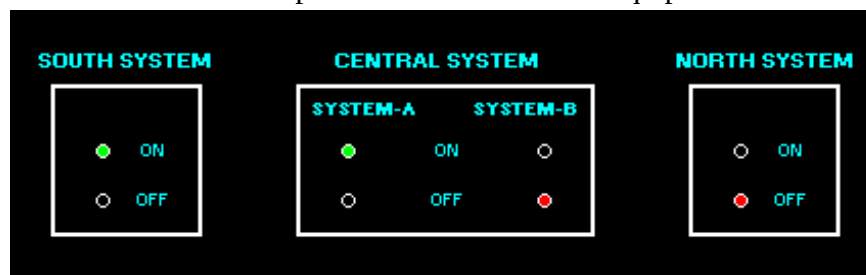
	29 & 30	IN'. Red lamp indicates 'Siding LOCKED'.	menu to Transmit / Receive/ of gate control as required.	
18.	Counter	-	As and when required SS/SM shall point the cursor on the counter icon and right click on it. A drop down menu will appear indicating all the counters available in the system. SS/SM shall select the required counter on the menu and can read the latest counter reading.	-
19.	Line Block button	Red when blocked	SS/SM shall point the cursor on the icons provided on the berthing track and right click . One drop menu will appear indicating line blocked and un-blocked, SS/SM has to select the required menu.	When line block is selected the concerned berthing portion of track will appear as thick Red line.

3.0 OPERATIONAL PROCEDURE THROUGH VDU AND INDICATIONS

In addition to the mimic yard diagram various other indications will be available on the VDU. The implications of different indications provided and the operational procedure for different functions shall be strictly followed as per the following description.

3.1 ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS

Electronic Interlocking Equipment (E.I) at the center can work in either of the two modes i.e, System-'A' or System-'B'. On the VDU (Computer), there are two system indications in which Green indication mentioning the On-line system and the Red indication mentioning that the system is in power off condition. Similarly 'ON' and 'OFF' indications have been provided for the end E.I equipments.



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3.2 OPERATION PROCEDURE OF SS/SM KEY

To prevent the unauthorized operation by any person other than SS/SM on duty this facility is provided on VDU. On duty SS/SM needs to track the pointer to the “SM KEY” icon and click the ‘KEY IN’ menu by the clicking left button of the mouse, by this a Password window will appear. SS/SM on duty needs to enter the User name & password and press the ‘OK’ Button provided on the Password window. This will allow operating all the controls e.g., Signals, Points, and Crank handles Etc. through VDU. In case incorrect password or user name is entered, no operation can be made. In such cases the same procedure is to be repeated till correct password is entered.

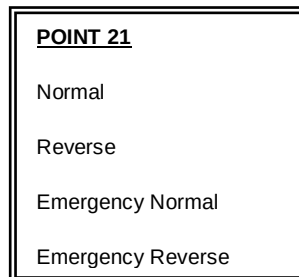


Enter the USER NAME and PASSWORD and click the OK button. Now the VDU is ready for use & the entire yard can be controlled from the VDU

Similarly select the KEY OUT when the Station Master to Prevent the Unauthorized Operation with User name and password.

3.2 OPERATION AND INDICATION OF POINT

To Operate the Point the SS/SM /ASS needs to track the mouse pointer to concerned point's Normal/Reverse indications on the VDU, after clicking by the left button on the mouse a pop-up menu will appear as below:



3.3.1 REVERSE TO NORMAL OPERATION

Track the pointer to NORMAL menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal.

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3.3.2 NORMAL TO REVERSE OPERATION

Track the pointer to REVERSE menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse.

3.3.3 POINT INDICATIONS

When the point is free a SS/SM shall steady strip of light will appear in the point zone (In case of cross-over at both ends) indicating the point is in normal/reverse condition. When the point is operated the same strip of light starts flashing till the point is set and becomes steady when the point is set and detected. When the point is engaged in a route a yellow light will appear near the point indicating that the point is locked and cannot be operated now.

3.4 PROCEDURE FOR SETTING OF ROUTES AND TAKING OFF SIGNALS

To Take-Off a Signal on the desired route the SS/SM on duty needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button of the mouse a pop-up menu will appear as below:

<u>SIGNAL S1</u>
S1 – S7 (SH)
S1 – S7 (ML)
S1 – S11
C1 – S7(SH)
C1 – S11
MAIN SIGNAL CANCEL

SS/SM on duty will select the route as per the requirement by moving the mouse pointer on the appropriate menu & left clicking on the menu. It will set the route and clear the signal provided all the conditions required to clear the signal is satisfied. Similarly by following the similar procedure operation of other signals can be done.

3.4.1 SETTING A ROUTE AND ITS INDICATIONS

To set a route of a signal, click on a possible route of the signal, after doing so the route gets initiated & Red-flashing indication will appear on the replacement track of the signal. Point operation is initiated as per the requirement of the desired route and Normal/Reverse set indications will starts flashing if favorable point detection is not available. After setting of points in the route, overlap & isolation Flashing indication will be replaced by steady indication and a complete yellow 'Route set' indication will appear from the replacement track of the signal to the last track of overlap section of the route. Also the points lock indication will appear. A Point locked can be ensured from the Red

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Steady indication will appear near the point. Finally a Route locked Yellow Steady indication will appear on the immediate rear of the signal. Now the signal will be Taken-off. The yellow route set indication will turn to red when different track circuit portion within the route is occupied during passage of a train.

3.4.2 **SHUNT SIGNAL OPERATION:**

The same procedure as main signal has to be followed as explained above. To set the signal route for shunt signals SS/SM on duty shall put the pointing device on the Shunt signal icon and left click on the same. A drop down menu will appear indicating different actions that can be selected. After selecting the desired route SS/SM on duty shall left click on it. Desired will be initiated and the Shunt signal will be taken off.

3.4 **CALLING ON SIGNAL OPERATION**

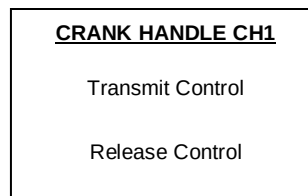
The same procedure as main signal has to be followed as explained above. To set the signal route for CALLING ON signals SS/SM on duty shall select the desired route and left click on the same after a train occupies the approach track circuit in immediate rear of the stop signal. The signal is cleared after a lapse of 120 seconds provided other conditions are fulfilled.

3.5 **CRANK HANDLE CONTROL OPERATION**

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the crank handle is free. To Transmit or Receive control of the Crank Handle, click on the crank handle control button icon provided like the following on VDU.



The appearing pop-up menu gives details of the possible commands on the Crank Handle



To Transmit the Crank Handle KEY to the field personnel SS/SM on duty has to click transmit control menu. After transmission the 'KEY IN' indication will start flashing, now the KEY can be extracted from the RKT at site. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the crank handle key in the RKT, 'KEY IN' flashing indication will appear on the VDU, Now the SS/SM on duty has to Release the control for the Steady

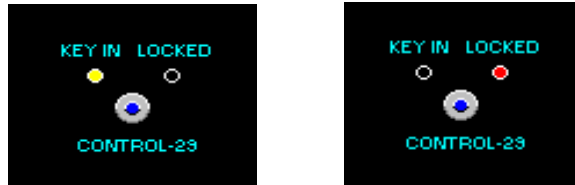
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indication by clicking release control menu.

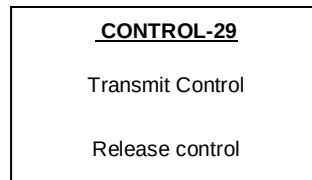
A Crank handle locked indication (Red) will appear when the particular point is on the signal route set over it or engaged in route setting in any other way.

3.6 SIDING CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the siding key is in condition. To Transmit or Receive of the Siding Control, click on the Siding control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Siding Control



For Transmitting the Siding Control KEY to the field personnel SS/SM on duty has to click transmit control menu. After transmission the KEY IN indication will start flashing, now the KEY can be extracted from the RKT. After extracting the key from the RKT, the key IN indication will disappear. When the Siding point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the VDU, Now the SS/SM has to Release the control for the Steady indication by clicking release control menu.

A Siding Control locked indication (Red) will appear when a route is set over the particular Siding point or in some manner it is involved in route setting procedure.

3.7 LEVEL CROSSING GATE OPERATION

To Transmit or Release control of the Level crossing gate, click on the Level crossing control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Level crossing gate.

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LEVEL CROSSING 31

Transmit Control
Release Control
Emergency Gate Release

Normally no indication will be available on the VDU indicating that the gate control key is out and gate is open. When it is required to close the gate SS/SM on duty shall intimate the gate man to close the gate supported by exchanging PN. Upon instructed by the SS/SM on duty the gate man shall close and lock the gate and after reversing the concerned slot lever he shall transmit the gate control key to station by inserting and transmitting the key in the RKT. A flashing yellow indication will appear on the VDU seeing which SS/SM on duty receive the control by clicking on the L.C. Gate control button icon (control-31) and select 'Receive'. The flashing indication shall become steady.

When the key is required to be transmitted to the Gate man, SS/SM on duty has to transmit the control by clicking, after transmission the KEY IN indication will start flashing, now the KEY can be extracted from the RKT. When the gate has been closed, locked & slot lever is in reverse position, After putting the key in the RKT, A KEY IN flashing indication will appear on the VDU. Now the SS/SM /ASS/SM has to release the control for the steady indication.

The locked indication will appear when the LC Gate has locked by initiation of any of the possible signal routes.

3.8 OVERLAP TIME RELEASE (WHITE LIGHT):

Separate indications (White Light) for each overlap is provided near the starter signal to indicate the free or locked condition of overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

4.0 EMERGENCY OPERATIONS:

To carry out different emergency operations the following procedures are to be followed.

4.1 CANCELING A ROUTE/ EMERGENCY ROUTE RELEASE

To cancel a signal route when the route is set and the signal is taken-off, click on the signal. After clicking by the left button on the mouse a pop-up menu will appear as shown in Para 3.4 above. Click on the cancellation menu (Main/ Calling on) of the concerned signal, the signal will immediately go to 'ON' aspect, after doing so click on the Route release menu the route locked indication will start flashing for 120 sec & the Emergency Route Release Indication (UP / DN as the case may be) will flash for the entire time interval. After the completion of 120 sec, the locked route will be released.

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This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Route cancellation along with the latest counter no. in a register.

4.2 EMERGENCY NORMAL OPERATION OF POINTS

When the Point zone Track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

Note: Before resorting to this operation SS/SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.

4.2.1 NORMAL OPERATION

Before doing the emergency operation the Emergency Point Operation Key is to be made "KEY IN" by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is CHE. Track the pointer to 'EMERGENCY NORMAL' menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for "KEY OUT" also.

4.2.2 EMERGENCY REVERSE OPERATION OF POINTS

Before doing the emergency operation an Emergency Point Operation Key is to be made 'KEY IN' by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is DSL. Emergency reverse menu to be clicked. Track the pointer to 'EMERGENCY REVERSE' menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for 'KEY OUT' also.

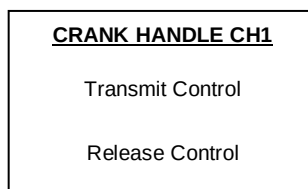
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4.2.3 **EMERGENCY CRANK HANDLE RELEASE OPERATION**

When a crank handle is locked due to route set earlier is not released or otherwise to Transmit or Release control of the Crank Handle, SS/SM on duty shall cancel the relevant signal first and then click on the crank handle control button icon provided like the following on the VDU.



On clicking, the appearing pop-up menu gives details of the possible commands on the Crank Handle



For Transmitting the Crank Handle KEY to the field personnel SS/SM on duty has to click transmit control menu. After transmission the 'KEY LOCKED' (Red) indication will start to flash for 120 seconds & 'KEY IN' remains steady. After a lapse of 120 seconds the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will start to FLASH. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the emergency crank handle key in the RKT, flashing 'KEY IN' indication will appear on the VDU, Now the SS/SM on duty shall Release the control for the Steady indication by clicking 'RELEASE CONTROL' menu.

The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter number in a register.

4.3 **EMERGENCY GATE OPERATION**

L.C. Gate control can be released and the gate can be opened by this operation when LC gate control remains in locked condition due to setting of any of the signal routes over it or otherwise. For releasing the gate by the Emergency operation the SS/SM on duty has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate release control in the Gate pop-up menu. Now the 'LOCKED' (Red) indication will flash for 120 seconds & after the time has elapsed the 'LOCKED' (Red) indication will vanish. Now the SS/SM on duty shall transmit the 'GATE CONTROL' in this condition and 'KEY IN' indication starts flashing. Now the KEY can be extracted from the RKT at Gate Lodge and gate can be opened. This action will be

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recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM/ASS/SM manually in a register.

The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Gate Operation along with the latest counter number in a register.

4.4 **LINE BLOCK AND UNBLOCK (REMINDER COLLAR):**

When SS/SM on duty requires demarcating a berthing/stabling line as BLOCKED / FREE line he shall adopt the following procedure:

4.4.1 **LINE BLOCK**

To set the 'LINE BLOCKED', the SS/SM on duty shall select "L. No. ___ BLOCK" command using the left mouse button, after selecting the Line Block that particular line will be blocked for all the possible Track circuit section on that particular line. The 'TRACK BLOCK' yellow colour indication will be displayed after the successful application of such a blocking process on the VDU.



4.4.2 **LINE UNBLOCK**

To release the set block of any particular line, the SS/SM/ASS/SM should select "L. No. ___ UNBLOCK" command using the left mouse button. After selecting the "L. No. ___ UNBLOCK" that particular line will be available for the train movement leading to all the possible L1 Track circuit section.

5.0 **PROCEDURE FOR RESETTING OPERATION OF LVCD (DIGITAL) AXLE COUNTER IN SECTION PDU-SGDM AND PDU-DUSI.**

Digital Axle Counters are provided on both Up & Down Block sections between PDU-SGDM and PDU-DSI. The occupation and clearance of the axle counter section are indicated on VDU by RED & GREEN light respectively. When after arrival of a train the LVCD Axle counter does not show clear indication and the 'Section Occupied' indication continues to glow SM on duty shall initiate resetting procedure for the LVCD Axle Counter, monitoring the Block section. Before initiating Resetting procedure SS/SM on duty shall ensure that the train which has left the sending station arrived completely at receiving station and block section is clear [free] of trains. If the track

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indication of that particular block section is showing ‘Red’ then the following actions are to be performed by the SS/SM on duty.

The SS/SM on duty at PDU Station shall verify with on duty SS/SM at receiving station over phone, to ensure the complete arrival of the train in his station.

Resetting of Digital Axle Counter Cooperation is necessary from adjacent station.



On duty SS/SM shall track the pointer to the “ **Axle Counter Reset key** ” icon and click left button of the mouse and select “**KEY IN**” option.



Move the Cursor pointer near to the Axle Counter Reset push button icon, and click left button of the mouse and select “**Reset**”. In VDU ‘**Power on**’ indication will appear above the reset push button and it will remain for 10 sec. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM/ASS/SM manually in a register.



The on duty SS/SM shall inform the SS/SM on duty at adjacent to carryout aforesaid resetting procedure. After completing reset operation in both side “**PREP RESET**” indication will appear above the reset push button icon.



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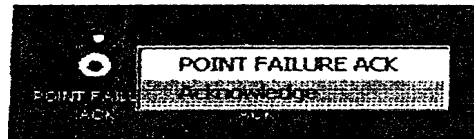
The Piloting In or out is mandatory for completion of Axle counter reset operation. Number changed for resetting, shall be recorded in the TSR and in the register provided for this purpose.

LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTTING BUTTON RED WITH WHITE DOT):

Whenever LED signal becomes blank, a miniature flashing Red light indication appears along with an audible buzzer indicates Signal lamp failure. The Station Master on duty shall press the signal lamp/point failure Ack. Button thereby the buzzer stops but the Red indication lamp becomes steady which continues till either the LED signal is replaced/rectified or signal assumes other aspect.

6.0 POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point button icon along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button icon is clicked, but the flashing light above the ACK button shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the 'POINT FAILURE ACK' button will disappear.



6.1 SHOWING OF COUNTERS

One counter icon has been provided on the VDU. When selected a drop down menu will appear indicating the following counters.

1. Emergency Route Release.
2. Emergency Point Operation.
3. Emergency Crank handle release.
4. Emergency Gate release.
5. LVCD axle counter resetting for section DUSI-PDU
6. LVUVAXT reset permission granting counter.
7. UP IB reset counter.
8. TRAR/14AXT reset permission granting counter.
9. DN LVV reset counter.

When the pointing device is placed any one of the menu the latest counter number will pop-up on VDU.

7.0 TRACK CIRCUITS

All the five berthing Lines are track circuited from Home signal to Advance starter signals at either direction of the yard. Approach Track Circuit (7 Rail lengths) for

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Calling-on signal are also provided in rear of the Home signals in both directions. In addition there are (5 Rail length) track circuits beyond Advanced starter Signals in both the directions for replacement of Last Stop Signal. Indications for the above track circuits are available on VDU at SS/SM office. Yellow strip on VDU indicates 'ROUTE IS SET AND TRACK CLEAR' and Red strip indicates 'TRACK OCCUPIED CONDITION'.

- 7.1** On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light engine or tower wagon etc., indicating the occupancy/clearance of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers by positively checking the 'entrance' and 'exit' track circuits are showing occupancy and clearance in accordance with the train movement.

8.0 AXLE COUNTER

Entire Block Section between PDU-DUSI and PDU-SGDM are provided with Digital axle counter as Last vehicle Checking Device.

For SEC.: PDU-DUSI a pair of Digital axle counter is provided between PDU-DUSI (Dn LVV PDU-DUSI) on Dn line, one just beyond Dn Advanced starter signal No 14 of PDU and another one on 2T2 track circuit beyond Dn Home Signal No.2 of DUSI. Similarly a pair of Digital axle counter is provided between PDU-DUSI (Up *LVV PDU-DUSI) on up line, one just beyond Up Advanced starter signal No. 13 of DUSI and another one on 1T2 track circuit beyond Up Home Signal no. 1 of PDU.

SECTION SGDM-PDU:

A pair of Digital axle counter is provided between SGDM-PDU on DN line, one just beyond UP IB Home signal no. 15 of SGDM and another on 1T2 track circuit beyond the UP Home signal of CPP. Similarly, a pair of Digital axle counter is provided between CPP-SGDM on DN line one just beyond UP advanced starter of PDU and another on 1T2 track circuit beyond UP Home signal of SGDM.

SECTION SGDM-CPP:

A pair of Digital axle counter is provided between SGDM-CPP on UP line, one just beyond UP IB Home signal no. 15 of SGDM another on 1T2 track circuit beyond the UP Home signal of CPP. Similarly, a pair of Digital axle counter is provided between CPP-SGDM on DN line one just beyond DN IB Home signal no. 14 of CPP and another on 2T2 track circuit beyond DN Home signal of SGDM.

The position of the Block section whether cleared *or occupied* are reflected in the VDU diagram provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters into the Block Section, "Block Section Clear indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of a train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and

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necessary action as per GR.14.3 is to be followed. The axle counters are interlocked with the respective block instruments for that section. *If Axle Counter fails, Advanced Starter signals shall not come to 'OFF' and the concerned instrument shall remain locked in last operated position for section PDU - DUSI and for section PDU-SGDM.*

A resetting arrangement for resumption of the system, in case of failure of Axle Counter, has been provided in the SS/SM office of the adjacent Block stations. After being assured by both the SS/SM that the last vehicle has *arrived* completely at the receiving station, the resetting procedure shall be initiated after exchanging Private Number vide G&SR 4.17, 4.17.01.

(Details of resetting procedure given in APPENDIX-'B' under para 5.0 of this SWR)

NOTE:

Before taking off reception and dispatch signals for UP and DN directions the SS/SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track circuit / Axle counter shall exhibit Red Light when track is occupied and Yellow light when track is clear and route is set. There will be no track indication when any route is not set.

9.0 TAKING OFF CALLING-ON SIGNAL

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13 (6)(b). A Calling-on signal shows no light in the 'ON' position. A Calling-on signal is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' for admission of train on blocked line or due to failure of main signal due to any other reason.

- 9.1** To take off Calling-on signal the train must come to stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the VDU. The particular route on which the train is intended to be received shall be set by selecting and setting desired route through VDU by SS/SM on duty. After a lapse of 120 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the VDU.

NOTE:

SS/SM on duty to ensure that no through signals are given while receiving a train on Calling-on.

9.2 RELEASE/CANCELLATION OF ROUTE

Normally when a train is received on any route or dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when SM on duty intends to cancel the route set by him shall follow procedure for cancellation of route described under Para 4.1 of APPENDIX-B above.

NOTE:

UP and DN Calling-on signals and UP and DN Advanced starters are to be manually

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cancelled after the passage of the train to release the route.

9.3 REPLACEMENT OF SIGNALS TO 'ON'

Signals are replaced to 'ON' automatically by the passage of a train beyond the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the SS/SM shall follow para no. 3.4 of APPENDIX-B.

9.4 INTERLOCKING OF SIGNALS

DN Advanced starter is interlocked with DLBI of section PDU - DUSI and Up advanced starter signal is interlocked with DLBI of section PDU-SGDM in Line Clear position.

The Block Instruments cannot be made normal unless the respective Home signal is put back to 'ON'. and the respective Block Section monitored by Axle Counter is clear of trains(LVCD). Signals once taken 'OFF' can be put back to danger in case of emergency by following Para no. 3.4 of APPENDIX-B even when the SM's Key is withdrawn from VDU.

9.5 PILOTING OF TRAINS IN TO STATION YARD

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

The SS/SM on duty shall nominate a clear line and shall advise the TPM on duty at station to set the nominated route with the help of crank handle if the points cannot be set from the VDU. Then the TPM shall set the facing and trailing points and clamp and padlock the same under the supervision of SS/SM on duty.

The SS/SM on duty shall then hand over the written authority (T/369(3b)) to the TPM for piloting the train. While going towards Home signal the TPM shall check the points and satisfy him self that the route is correctly set.

After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the locopilot, board the engine and display proceed hand signal to pass the Home signal.

NOTE:

- i) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR [Ref. SR 3.69.03(c)]
- ii) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SS/SM on duty or

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any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.

9.6 **PILOTING OF TRAINS - OUT OF STATION YARD**

When the starter signal has become defective, the Station Master on duty shall advise the on duty TPM to set all points correctly for the outgoing trains. Then he shall clamp and padlock the same under the supervision of SS/SM on duty. Then the SS/SM on duty shall hand over the pilot memo T/369(3b) (along with the other authority if necessary) to the on duty TPM. The TPM on duty shall hand over the authority to the locopilot of the train and display proceed hand signal at the foot of the starter vide SR. [Refer SR 3.70.01].

In case the advanced starter signal has become defective, such signal shall be passed on the written authority on the form T/369(3b). The TPM shall hand over the pilot memo in form T/369(3b) to the locopilot after the train stopped. [Refer SR 3.70.02]

9.7 **SHUNTING:**

Caution aspect of starter signals for shunting up to Advance Starter. For back shunting individual shunt signal No.3 and 4 are provided at North and South side of the yard respectively for shunting back to the station yard in desired direction. For taking OFF Shunt signals please refer Para No. 3.4.2 of APPENDIX-B.

10.0 **VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD**

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard shall be kept clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SS/SM on duty personally through VDU indications and/or physical verification of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

11.0 **a) HOT AXLE SIDINGS:**

One Hot Axle siding takes off from Line no.1 at VSKP end of the yard and terminates towards Station side. The siding is isolated by the derailing switch. The entrance point and corresponding derailing switch is coupled and operated by an arc lever provided at site. Hand plunger lock fitted at the entrance point is unlocked by a key (N) released from RKT which is transmitted through control no. 30 from VDU.

b) **BALLAST SIDING:** The ballast siding takes off from common loop at HWH end of the yard and is isolated by derailing switched on both sides.. the entrance points and corresponding derailing switched are coupled by arc levers provided at site at either end of the sidings. Hand plunger lock fitted at the entrance points of South and North end are unlocked by the keys (M1 and M2 released from RKTs which are transmitted through control no 29 from VDU. Whenever the keys are transmitted the UP and DN reception signals over common loop will be

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held in their Normal position. The ballast siding is isolated by a derailing sitch. The DS point is a hand operated point. The DS point shall be locked in its Normal position i.e isolated from Ballast siding and the key shall be under the custody of SM on duty.

12.0 CRANK HANDLING/EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the Signalling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument inside Location boxes in the yard and can be taken out only when all the signals leading are in the 'normal' position and the route is not locked for whatever reasons. Crank handle can be transmitted or released by following procedure as laid down in Para no.3.5 of Appendix-'B'. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

13.0 OBSERVATION OF TRACK CIRCUIT AFTER STABLING OF TRAINS ON RUNNING LINES

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN' 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. Station Master on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed to attend.

14.0 LOCKING OF RELAY ROOM

THE Relay Room at the station is provided with double locks (two independent locks) as necessary vide Optg. Manual - 1.14. One key shall be kept with the signal maintainer of the station and the other key shall be with SM on duty. The Relay room cannot be opened unless both keys are used.

SM on duty shall ensure that the Relay room key is given to S&T maintenance staff under clear signature as and when required for normal maintenance and for special works and that the key should be returned by the S&T staff immediately after completion of the work and documentation shall be made in the Relay Room key register maintained at the station according to SR 3.51.05 and OM 1.14.

15.0 MAINTENANCE OF S & T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of

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these installations at this station.

The tests, checks and replacements etc., shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

16.0 PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master to the sectional Maintainer, the signal inspector of the section and others through a memo as per GR and SR 3.51.04 and 3.68.04 and document all such transactions.

17.0 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE

Before declaring a point as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.

18.0 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING

After receipt of the failure information, the sectional Maintainer shall attend to the failure after giving a 'Disconnection Memo'. After rectification of the fault, the Sectional Maintainer shall give 'Reconnection Memo' detailing the rectification. Thereafter the Station Master on duty shall personally check this defective apparatus. After satisfying him self that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR.3.68.04 (C) and (D).

19.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom department should preplan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

20.0 EMERGENCIES:

Notwithstanding, anything contained in the aforesaid para as when equipment is found defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station master and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The Station Master must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment's according to extant instructions as contained in GR and SR.3.77.

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21.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL POINTS AND USE OF EMERGENCY CRANK HANDLE

- 21.1** Whenever a Signal or a Point become defective any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Station Master on duty personally for all trains at the Station.
- 21.2** In case of failure of Signal or a Point and in case the Point cannot be operated from the Panel, the emergency Crank Handle which is Interlocked with the system has to be extracted and the following procedure has to be observed
- 21.3** One common emergency Crank Handle is provided for all the Motor operated Points. This is mechanically riveted to the Key of HKT. This Key along with Crank Handle can be released from the HKT by pressing the Common HKT Push Button after cutting the seal between HKT and the Crank Handle. The Station Master on duty in case of Point Motor failure will take out the Crank Handle set the Point manually by inserting Crank Handle on the Motor.
- 21.4** When the Crank Handle is removed from HKT for operation of the defective Motor Operated Points, the responsibility for its safe custody re-sets with the SM on duty till it is replaced back in HKT and sealed by Signal Maintainer
- 21.5** The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification
- 21.6** Whenever an emergency Crank Handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the Points will be treated as defective till the Emergency Crank Handle is returned back to Station Master on duty.
- 21.7** Before parting with the Emergency Crank Handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to on position. The Points of all the lines should be treated as Non-interlocked and the Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.
- 21.7.1** The Emergency Crank Handle Register is to be maintained in the following proforma by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded:

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- 1 Date:
- 2 Point Number which failed or required to be tested
- 3 Time failure
- 4 Disconnection memo number received from S&T Staff
- 5 Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over
- 6 Time Emergency Crank Handle is sent out
- 7 Individual Point numbers, and Line number nominated for admission of dispatch for which Points are set, Clamped and Padlocked
- 8 Train number to be admitted or dispatched
- 9 Signature of the Station Master on duty to ensure correct setting, Clamping and Padlocking of the Points
- 10 Date and Time fault rectified
- 11 Time of Emergency Crank Handle received back by SM on duty
- 12 Signature and Designation of the Signal Official who rectified the fault

IMPORTANT NOTE:

When performing shunting operations in the sidings it must be clearly noted that the siding Points are interlocked with the system in the NORMAL position of the Points and in REVERSED position they are not interlocked. The Official responsible for shunting operation must clamp the Points at the both ends before permitting any movement

22.0 INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS

22.1 INTERLOCKING WITH HOME SIGNALS

All the UP and DOWN HOME Signals are Electrically interlocked with the respective DLBI so that before the handle of the DLBI Instrument can be turned from TRAIN COMING FROM position to LINE CLOSED position of UP or DOWN direction as the case may be must be in their NORMAL position.

22.2 The UP Advanced Starter Signal is Electrically interlocked with DLBI of section DUSI-PDU so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

22.3 The Down advanced starter signal is Electrically interlocked with DLBI of section DUSI-CHE so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

22.4 SUSPENSION OF LAST STOP SIGNALS

When the Double line block instrument for section DUSI-PONDURU and PONDURU-SIGDAM is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

When the Double line block instrument for section is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

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23.0 NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE

- 23.1** Digital Axle Counters are provided on both Up and Down line Block Sections between PONDURU - SIGADAM. And DUSI – PONDURU
- 23.2** The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.
- 23.3** If any Block proving Axle Counter [LVCD] section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last Vehicle Checking Device is to be resorted to either Section.
- 23.4** No train shall be allowed on signal to leave a station in any particular direction unless:-
- Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF. [Refer Para No:5 of appendix 'B' for procedure of resetting of LVCD Axle counter].

24.0 TELECOMMUNICATIONS:

- a) The Station is connected to VSKP-PSA Control Circuit
- b) Telephone attached to SGE type Lock and Block Instruments for sections PDU-SGDM and DUSI-PDU
- c) Railway Auto telephone is provided at this station
- d) Telephone communication is provided between SS/SM at station with adjacent stations
- e) Telephone communication is provided between SM on duty to UP & DN Crank Handle locations
- f) Telephone attached to L.C Gates ML-434, ML-435, ML-436 and ML-438.
- g) The station is connected to VSKP-PSA traction power control circuit
- h) The station is connected to VSKP-PSA traction Loco control circuit
- i) VHF set is provided at the station
- j) The station is provided with BSNL telephone.
- k) Magneto telephone is provided on UP IB signal post.

NOTE

- 1 For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication
- 2 VHF & Walkie-Talkie sets should not be used for unnecessary discussion with locopilot, Guards and any other staff.

25.0 POWER FAILURE INDICATION / BUZZER AND POWER ACKNOWLEDGEMENT **(A) POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION**

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Power signalling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) Normally supply from UP AT/DN AT connected to OHE Traction distribution [230 V 50 Hz].
- ii) Stand by supply from Andhra Pradesh State Electricity Board (APSEB) [Single phase 230V-50Hz].
- iii) Normal power supply [Single phase 230V-50Hz] to the Signalling & Interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails SS/Dy.SS on duty shall operate the rotary change over switch provided in the CLS power panel at SM's room connecting the power supply from the healthy sources to the installation.

The SS/Dy.SS on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Electrical Staff and S&T maintenance staff.

- i) Auto change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
- ii) Normally the switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, on duty SS/Dy.SS must ascertain the power is available on the other AT and change over the switch to desired position e.g if power block is to be given on the UP line, DN AT must be available and vice versa.
- iii) In case of failure of one of the AT supply without any power block, on duty SS/Dy.SS has to check whether the Miniature Circuit Breaker has tripped. (Three Miniature Circuit Breakers are provided in the changeover switch *board*, *one for each* supply and *their* normal position is UP and when tripped, it goes to DN). In case of failure of both AT supplies without any power block, the local supplies shall be utilized by operating the change over switch. If the Miniature Circuit Breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/GEN for prompt rectification.
- iv) Whenever there is a failure of power supply in one AT, the on duty SS/Dy.SS shall take prompt action to inform to all concerned for the rectification, The on duty SS/Dy.SS himself, during his daily checks, shall test the availability of power supplies on both AT's and make entry in station dairy duly initiating action for rectification of failure, if any.

(B) WORKING OF INTEGRATED POWER SUPPLY TIPS], INDICATIONS & ACTION TO BE TAKEN BY SS/DY.SS ON DUTY

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- i) Power supply to the signalling installation is fed through IPS installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected by SS/Dy.SS on duty. Standby power supply is through APSEB local supply. One change over switch is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto-change over switch provided in IPS.
- ii) The IPS system is connected with Battery as a back-up power source for safe working during transition of power and in case NO 230v AC supply is available due to any reason.
- iii) In the event of failure of all the sources of 230V, 50 Hz AC supply, the signalling system shall be fed by power generated by back-up battery Bank connected to IPS for a limited period of 08 to 10 hours. The health of battery bank is monitored through one IPS monitoring Panel provided in the SM's room which shall be display the voltage 110V DC [Battery bank provided as back-up source of power supply]. Depending upon the health of the Battery Bank and the system, the following indication/alarm will appear on the Remote Monitoring Panel, their implications and action to be taken by SS/Dy.SS on duty is tabulated below.

SN	Instruc- tion	Health of Battery Bank/Equi pment.	Visual Indication	Audio Indication	Action to be taken by SS/Dy. SS on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red,	Alarm	Failure of any module will give the alarm in ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

On duty SS/Dy.SS in each shift shall check and record the readings, indications, etc in the station dairy duly initiating rectification of failures of IPS system, if any.

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In the event of failure of remote monitoring ASM console due to any reason or when both traction power and local power failed, the SS/Dy.SS on duty shall inform concerned Electrical staff immediately. In case 'Call S&T staff ' or 'system shut down' indication appear on the remote monitoring panel of IPS and/or malfunctioning of the remote monitoring panel SS/Dy.SS on duty shall inform the same to concerned S&T staff immediately.

NOTE: In case of failure of all AC supply sources IPS Battery Bank can provide power supply, before system shut down indication of IPS.

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APPENDIX 'F' TO STATION WORKING RULES OF PONDURU STATION:

RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS:

1. RULES FOR WORKING INTERMEDIATE BLOCK SIGNALLING

BETWEEN PDU- SGDM:

The block section between PDU- SGDM has been split into two block sections by providing Intermediate block stop signals at km: 768.633 (controlled by SGDM station) for DN line and on UP line at km: 768.833 (controlled by PDU station). Intermediate block stop signals are controlled through Double line lock and block instruments at the respective receiving ends.

(a) The block working for section between PDU- SGDM on UP and DN lines is controlled by the provision of DLBI (SGE type) and are provided at SGDM and at PDU stations. The DN advanced starter signal no. 14 of SGDM and UP advanced starter signal no. 13 of PDU are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB home signals are controlled in turn through the line clear position of respective DLBIs at the receiving stations.

(b) Trains between intermediate block signal to respective home signal of station in advance in both sides are worked by means of SGE type lock and block instruments vide G& SR 4.09, 5.07, 14.01 to 14.14 and chapter V of BWM.

(c) Last stop signal to the intermediate block stop signal in both sides are controlled by Electronic axle counter and are worked under absolute block system in terms of G & SR 14.01, 14.13. Indications on VDU provided at PDU station.

2. INDICATIONS PROVIDED ON VDU FOR I.B. SECTION:

The indications of signals, IB and Block sections in both up and down directions are shown in the following table:

2.1 SECTION PDU- SGDM (UP DIRECTION):

Sl. No	Signal Aspect [S-13]	IB Section Indication [13 AXT]	IB Home Aspect [S-15]	Block Section Indication	Remarks.
1	Green	While	-	-	Advance starter No:13 is taken off to dispatch

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		Illuminated			a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of PDU.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

2.4 SECTION SGDM-PDU (DN DIRECTION):

Sl. No	Signal Aspect [S-14]	IB Section Indication [14 AXT]	IB Home Aspect [S-16]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 14 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of SGDM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

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2.5 Buzzer/Bell:

a) One audio buzzer is provided in the SM room at SGDM to detect Train Entering section for outgoing trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing at SGDM station. On hearing the buzzer/bell the Dy. SS/SM must acknowledge the same by clicking on train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the station master of the station in advance who shall turn commutator of the Double Line Lock and Block Instrument from the Line Clear position to 'Train On Line position' and acknowledge train entering section following the procedures laid down vide Block Working Manual.

Train Run-Away buzzer:

When a train passes IB signal at ON position SM/SNM of dispatching station receives the train run away buzzer and displays flashing indication on the VDU. The SM/SGDM by acknowledging the train run away button, the buzzer stops and the indication remains steady and after train passes IB signal and beyond 400mts the indication also disappears.

b) In the event of failure of I.B. track circuit [i.e. track clear indication not available] which shall not permit taking 'OFF' last stop signal, it should be ensured by Dy. SS/SM on duty at the dispatching station through exchange of private number with the Dy. SS/SM of the receiving station that the last train that passed the last stop signal of his station has fully arrived at receiving station, before allowing the next train to enter in to the section, PDU- SGDM shall be shall be treated as single section.

c) By issuing the pilot memo when normalization of the system is not possible, in such case, line clear has to be taken on lock and block instrument. Trains are to be dispatched from the station only after obtaining line clear till such time track circuit or last stop signal is restored to normal.

d) NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:

i) No train should be allowed to leave station in any particular direction unless I.B. track clear indication is available for the relevant track circuited portion of I.B. section and last stop signal cannot be taken off and provision stipulated in **Para g.III to be followed.**

ii) A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the Dy. SS/SM on duty at either end station of the Block section is provided, which should only be resorted to

STATION WORKING RULES OF PONDURU (PDU)

after the train that was lastly sent arrives fully at the receiving station and is certified in this respect by the Dy. SS/SM at the receiving station through exchange of private number.

iii] For monitoring of I.B. section working & re-setting of I.B. Axle counters, Track Indications and Re-setting arrangements are provided with button icons on the VDU at PDU station and at SGDM station. Counters are also provided for the purpose of recording the re-settings for the I.B. Axle Counters in case of failures in IB section. The Re-setting icon and permission granting icon on the VDU at SGDM should normally be kept sealed by the S&T staff and Dy.SS/SM will inform the Maintainer for resealing the same whenever the seal has been broken.

iv] The Dy.SS/SM on duty at PDU station shall maintain a separate register for use of resetting at IB Axle Counters wherein every operation of the resetting button shall be recorded giving details of date of use, train, number, time, number registered in the counter on VDU and reasons for resetting and initial each such entry.

v] The procedure for resetting of the I.B. Axle counters in terms of clause g.II above shall be as follows:

SECTION PDU- SGDM ON DN LINE:

	DISPATCHING STATION [SGDM]		RECEIVING STATION [PDU]
1	Dy.SS/SM on duty shall call the attention of SS/Dy.SS of PDU station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/Dy. SS on duty at PDU after verifying that the said dispatched train arrives fully, shall exchange private number with Dy.SS/SM on duty at SGDM and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel.
2	On getting re-set permission on VDU Dy. SS/SM on duty shall acknowledge by clicking on 'Permission received from PDU' acknowledgement button icon. For each such operation the reset counter provided in VDU shall increase by one digit.	2	SS/Dy. SS on duty at PDU shall continue to press the 'Permission Granting' button.

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	Dy. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.		
3	Dy. SS/SM on duty then shall re-set the I.B. Axle counter by clicking on 'DN Re-set Key' and select 'Key In'. After which he shall click on the 'Re-set button' icon, which will reset the Axle Counter.	3	SS/Dy. SS PDU shall also press 'Re-set' button provided on re-set panel at PDU station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on VDU.	4	The SS/Dy. SS on duty at PDU shall record in his train register the re-setting operation giving train number, time and private number exchanged with the Dy. SS/SM of SGDM station giving reasons for the re-setting operation.

2.5 SECTION PDU-SGDM ON UP LINE:

	DISPATCHING STATION [PDU]		RECEIVING STATION [SGDM]
1	SS/Dy .SS on duty shall call the attention of SS/Dy. SS of SGDM station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	Dy. SS/SM on duty at SGDM after verifying that the said dispatched train arrives fully, shall exchange private number with SS/Dy. SS on duty at PDU and gives permission to re-set by clicking the 'Permission Grant' push button [To PDU] provided on the VDU.
2	On getting re-set permission on re-set Panel SS/Dy.SS on duty shall acknowledge by pressing 'Permission received from SGDM' acknowledgement button. For each such operation the reset	2	Dy. SS/SM on duty at SGDM shall continue to click the 'Permission Granting' button'.

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	counter provided in Operating Panel shall increase by one digit. SS/Dy. SS on duty shall make an entry of changed Reset counter number in re-setting register.		
3	SS/Dy. SS on duty then shall re-set the I.B. Axle counter by turning 'UP Re-set Key' and press the 'Re-set button' on the re-set panel, which will reset the Axle Counter.	3	Dy. SS/SM SGDM shall also click 'Re-set' button provided on VDU at SGDM station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on re-set panel.	4	The /Dy. SS/SM on duty at SGDM shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/ Dy. SS of PDU station giving reasons for the re-setting operation.

2.6 DISPATCH OF TRAINS:

Dispatch of trains is governed by the provision of G & SR 3.42, 3.70 and Block working manual rules.

a) From PDU towards SGDM.

Train will be dispatched in accordance with the General Rules 3.42, 3.70., 3.75, 4.35 and 8.01 and subsidiary Rules thereto.

b) PDU TO IBS ON UP AND DOWN LINES:

The Dy. SS/SM on duty shall ensure that the portion of line between Advanced Starter and 400 Mtrs beyond IBS at their respective ends is clear of obstruction and indication to this effect is available in the VDU and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is withdrawn and kept in his custody.

Advise the Station Master at the station in advance, of the train No. and description of such intended train to be dispatched and shall take his assent

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supported by Private Number and shall then set and lock the route and take off the Starter and Advanced Starter.

c) IBS SIGNAL TO THE STATION IN ADVANCE:

The Dy. SS/SM on duty shall obtain line clear over lock & Block instruments from the station in advance to dispatch a train past the IBS signal at the respective ends and shall take off the IBS signal by means of taking of signal No.15 of PDU. After the train passes the intermediate Block Stop signal of PDU a buzzer will ring in the VDU. On hearing the buzzer/bell the Dy. SS/SM must acknowledge the same by clicking train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the cabin master of the station in advance who in turn will turn commutator of the Double line Lock and Block Instrument from the line clear position to Train On Line position and acknowledge train entering section. After dispatch of a train from PDU into the Block section between PDU and intermediate Block Post in case when the intermediate stop signal is not taken 'off' but the buzzer has started ringing, this may be either due to the train passing intermediate Block stop signal at 'ON' position or due to failure of the track circuit in advance of that intermediate Block Signal and shall exchange Private Number with the Cabin Master in advance indicating the occurrence and the number of the train. On getting the information from the Station Master/SGDM, the Dy. SS/SM on duty at PDU in turn will inform SCR on duty about this.

The procedure must be rigidly followed irrespective of the fact whether line clear for train has been received from station in advance or not and this must be recorded in the Train Register and Dy. SS/SM's diary book of both the Stations/Cabins.

d)(i) Dispatch of trains towards SGDM in case of failure of the Down/UP Advanced Starter signal at PDU Station due to failure of "Axle Counter" device or otherwise. If the failure of the Advanced starter of PDU due to the failure of axle counting device or the indication lamp (repeated by indication lamp) showing 'Red' light either due to power failure or due to any other causes, the resetting "Push Button" provided with counter at the Dy. SS/SM's office for resorting the normal function of the signal, should be operated accordingly to the following instruction whenever the Advance starter signal of PDU is found defective by the Station Master and the following procedure shall be adopted.

On receipt of this information, the Dy. SS/SM on duty after ensuring that all trains which had left his Block Station had arrived complete and intact at **SGDM** station (by exchange Private Number with the Dy. SS/SM **PDU** confirming this), shall press the resetting button of the axle counter. When the resetting is successful, it shall be indicated by a green light in the resetting panel provided in the Dy. SS/SM's office at **PDU**. The use of this resetting button is registered on the counter and the Dy. SS/SM should record this giving the details of the occasion with timings in the counter register kept in the station.

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If it is not possible to restore normal working of the counter by use of the resetting button, the ESM-in-charge of the section shall be served with a written memo to attend the defective signal and rectify the same. The ESM-in-charge of the section on being served with a memo by the Dy.SS/SM, shall attend the failure and rectify the fault. The ESM after ensuring that all S&T gears relating to defective signal have been attended to and are in working order except the axle counter which needs re-setting shall establish communication with Dy. SS/SM concerned and ask him to reset the axle counter by pressing the reset push button. Where after the Dy. SS/SM on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at **SGDM** (by exchanging of P.N with **SS/DY SS/SGDM** confirming this) shall press the resetting button provided in the VDU at **PDU** station and resume the normal working.

e) DESPATCH OF TRAINS IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL:

[a]When a driver finds an intermediate Block Stop signal at 'ON' Position he shall stop his train in rear of the signal and advise the guard of the fact by sounding long continuous whistle and shall then contact the Station Master of the Block Station in rear over the signal post telephone provided for the purpose vide SR.3.75.01[i].

[b]If the Dy.SS/SM of PDU station, on being contacted over Telephone by the driver, finds that the signal is defective, he shall, after obtaining "Line Clear" for the train from the station in advance, authorized the driver on the telephone to pass intermediate Block Signal at "ON" and enter the block section ahead. He shall give Driver the Private Number and identification Number under which he has received "Line Clear" for the train from the station in advance.

The Loco pilot shall then sound one short, one long and one short whistle and, on receipt of Guard's signal shall proceed ahead duly exchanging signals with him.

The station Master on being contacted by the Loco pilot on signal post telephone if he is unable to obtain "Line Clear" for the train due to total interruption of communications, shall call for the Guard's through the Loco pilot and on being contacted by guard, he shall advise the guard of the circumstances and give a Private Number for the train to proceed up to the next block station.

The guard shall prepare a memo in duplicate authorizing the Loco pilot to proceed with the Private Number received from the Station Master. In such case the speed of the train shall be restricted as prescribed in GR 3.75(3).

[c]In such case the Loco pilot shall pass the IB signal at "ON" and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 15 Kilometers an hour if he has a good view of the line ahead,

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otherwise at a speed not exceeding 8 kilometers an hour and report the failure to the Station Master at the block station ahead.

While complying with the instructions contained in GR 3.75(3), when the Loco pilot has to pass IB signal at “ON” after waiting for 5 minute at the signal, he shall proceed cautiously preparing to stop short of any obstruction at a speed not exceeding 15KMPH when view ahead is clear and 8 KMPH when view ahead is not clear due to curve, obstruction, rain, fog or any other cause until he reaches the foot of the next stop signal and even the signal is “OFF” the Driver shall continue to look out for possible obstruction short of the same and will act upon its indication only after he has reached it. Before starting, the Loco pilot shall sound one long whistle which may be repeated as necessary and shall then start his train on receipt of Guard’s signal. Thereafter he shall exchange signals with the Guard.

On reaching the block station ahead the Loco pilot shall report the failure of the signal to the Station Master. If, the telephone is provided at the intermediate Block Stop signal Post is out of order the Loco pilot ck station ahead, the Loco pilot shall report the failure of the signal to the Dy. SS/SM, Following train shall not be allowed to leave **PDU** unless the complete arrival of the receiving train is certified by the SM on duty at **SGDM** under exchange of Private Numbers.

The station Master of the block station working the intermediate block stop signal on becoming aware that such a signal is defective shall, before dispatching the train, treat the entire section up to the block station immediately ahead of the intermediate block post as one block section and issue a written authority to the Loco pilot to pass the defective intermediate Block Stop Signal at “ON” without stopping at the signal. In accordance with the procedure prescribed by special instruction.

A written authority as mentioned in GR 3.75(4) shall be in Form T/369[3b] in which the Private Number and identification Number obtained from the station in advance in support of the “Line Clear” shall be recorded. Display of “Proceed hand signal at the foot of defective Intermediate Block Stop Signal may be dispensed with.

[d]However, if the DY.SS/SM on the Block station immediately in rear of an intermediate Block Signal is aware that UP/DN intermediate Block Signal is defective shall before Dispatching a train shall verify that all trains which had left his Block Station had arrived complete and intact at **SGDM** station (by exchanging Private Number with SM- **SGDM**) shall press the resetting button of Axle counter equipment. Thereafter Loco pilot shall be handed over the authority of T-369[3b] to pass IBS Signal at “ON” position where in, the Private Number and indication number obtained for line clear, shall also be written. The use of this

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re-setting push button is registered on the counter and DY.SS/SM should record this usage giving details of the occasion with timings in the Counter/register and also train registers.

(e) INDICATION CUM RESETTING PROVISION IN THE VDU AT PDU:

The VDU provided for following light indications:

(i) Two green indications for the track- circuited portion by Axle Counter, which remain normally lit to indicate that the track is clear. These lamps extinguish no sooner the train passes the last stop signal and their place two red indications are lit to indicate that the track is occupied.

(ii) Two red indications for the last stop signal replacement track circuit which remain lit so long this track- circuit is occupied or in under failure condition.

(iii) Two red indication ahead of the IBS Signal, which are lit if the train passes the said signal in “ON” Position. These indications continue to glow till such time the lock and block working is resumed through emergence re-setting feature.

(iv) Two red indications just ahead of IBS Signal for the IBS signal replacement track circuit. These indications normally remain dark and are lit either during occupation by a train or during failure of this track circuit.

(v) Two red indications for the block section for receiving trains. These indications shall normally remain no indications and shall be lit only when the incoming train passes the IBS signal. It remains lit till such time train arrives fully and Block Instrument is normalized.

f) RE SETTING PROVISION IN THE VDU AT SGDM STATION:

For resetting of I.B. Axle counter please refer Para No: 5.2 of Appendix ‘B’ of this SWR

g) SPECIAL INSTRUCTION IN CASE OF A TRAIN PASSING IBH AT ‘ON’ POSITION:

i] In case train run away indication appears the Dy.SS/SM/Cabin Master receiving Station shall not turn the block instrument handle to line clear position and Dy.SS/SM at sending station shall not take any action to dispatch the third train unless the second train which passed the IB signal in the ‘ON’ position has actually arrived and its complete arrival is verified by the receiving station.

ii] Every case of a train passing IB signal at ‘ON’ position without strictly following the provision of GR 3.75 should be treated as a breach of block rule by the Loco pilot and action to be taken accordingly.

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iii] When train run away indication appears at the Dispatching Station without any train in the section, the IBS system should be treated as failed and Signal Maintainer should be advised. All the subsequent trains shall be Piloted OUT after duly taking line clear treating entire section as one Block section as per GR 3.75(4).

iv] whenever a train after having obtained line clear passes IBS (when not taken off) in “ON” position the train run away indication appears at the Dispatching station and train entering section indication appears at the receiving station, under such circumstances no further train shall be allowed in the section till the said train arrives completely at the receiving station i.e., station in advance, and its complete arrival received at the receiving station i.e. station in rear supported by Private Number treating the entire block section as single section.

v] If any train passes IB Signal at ‘ON’ position when there is a train in the Section between IBS and the station ahead, the train run away indication will appear at both receiving and Dispatching station. Under such circumstances the Dy.SS/SM in the receiving station shall not turn the Block instrument to Line Clear position and Dy.SS/SM at sending station shall not take action to dispatch the (3rd) train, unless the 2nd train which passes the IBS in the ‘ON’ position has actually arrived and its complete arrival is verified by the receiving station.

vi] Permission button to be pressed for the runaway train by break opening the seal only after verifying that the last vehicle of the runaway train has arrived in - tact and ensured by exchange of private number with the Dy.SS/SM of the sending station. In case of failure of Axle Counter equipment at the sending station, permission button may also be pressed for normalizing the system only after verifying that there is no train in the section and after duly exchanging Private number with the Dy.SS/SM of the sending station.

vii] Whenever a train run away indication appears when there is a train in the section, no further train should be allowed in the section till resetting is done as per item No.30.3 above.

viii] Before any re-setting operation is done, the Dispatching station should advise the receiving station giving details of the last train that has entered the section and should ensure by exchanging of private number that the last train has arrived complete at receiving station.

Every Case of re-setting shall be entered in a register in the following proforma.

Date and time	Train No. Last entered the block	Private No. of station ahead for Complete Arrival of the	Counter No Before resetting operation	Train No. Entering Block section	Remarks	Signature of Dy. SS/SM
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	section	train Col.2	Under	completed	Immediately after the resetting operation		
1	2	3		4	5	6	7

ix] If resetting is not possible under item as mentioned above, the system should be treated as failed and train will work treating the entire section up to the Block Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).

x] Action to be taken when a train passes Intermediate Block Stop Signal at 'ON'

a) By Dy.SS/SM of Block Station in advance of the Intermediate Block Stop signal:

i] Shall not turn the Block Instrument commutator to "Line Closed" Position Unless the complete arrival of the train which passed IBS at "ON" position is ensured, without any exception even for such a train which leaves the rear station after obtaining line clear and passes IBS at "ON" position, since there is a

chance of leaving a vehicle or vehicles in the Axle Counter area where the function of Axle Counter also fail when IBS is passed at "ON" position.

ii] In case the bottom needle of the SGE type block instrument is in its 'Line closed' position, action should be taken to turn the block instrument commutator to 'TOL' Position vide BWM 5.16(2)(iv) and must not turn to "Line closed" and then to "Line clear" position unless the train which had passed the "Intermediate Block Stop Signal" in the 'ON' position arrives complete and its complete arrival is verified.

b] By the Dy.SS/SM/ASM of Block Station in rear of the intermediate Block Stop Signal must ensure that last stop signal controlling entry of trains into the section between the last stop signal and the intermediate Block Stop Signal is in its 'ON' position and shall under no circumstances take 'OFF' or attempt to take 'OFF' the said last Stop signal even if the Axle counter/Track circuit section from his block station up to and including the adequate distance beyond the Intermediate Block Stop signal shows 'clear' unless the train which had passed the intermediate Block Stop signal in the 'ON' position arrives complete the block station in advance and its complete arrival is verified, and intimate the Dy.SS/SM/ASM of the block station in advance the number, description and the departure time of the last train Dispatched from his block station under exchange of Private number.

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c] By the Dy.SS/SM of both the block stations in rear and in advance of the intermediate Block Stop Signal:

i] After the complete arrival of the last train, according to the information received vide sub-para (b) above, the Dy. SS/SM of the block station in advance shall communicate the same to the Dy. SS/SM of the station in rear supported by a Private Number which shall be acknowledged by the later by issuing Private Number. Thereafter the Dy. SS/SM of the dispatching station and the Dy. SS/SM of the receiving station shall operate the 'Resetting' and 'reset' panel respectively in conjunction with the Dy. SS/SM of the Block Station in advance shall then take steps or authorized Dy. SS/SM of the receiving station supported by a Private Number to normalize the block instrument.

ii] Record of Private Number exchange and the number shown in the counters shall be maintained by the concerning Dy. SS/SM in the train signal (Cum log) Register/Trine Log Register.

It is to be noted that in terms of GR3.75 whenever intermediate block stop; signal is at 'on' the Loco pilot must stop his train in rear of the signal and contact the Dy.SS/SM of the block Station in rear on the telephone provided on the signal post who will authorize him to pass the signal in 'ON' position supported by Private Number and identification number which were taken for the line clear from the station in advance. If the telephone is not provided or is out of order, the Loco pilot, after waiting for 5minutes shall pass it at "ON" but he must report the failure to the DY SS/SM at the Block Station ahead after following the provision in GR.3.75(3). This would mean that the Loco pilot shall either get an authority on telephone from the station master or must report at the station ahead about the failure of the telephone. If none of those provisions are complied with, it should be taken as breach of Block Rules.

iii] In the event of failure of IBS signal in the "OFF" position or cannot resume to "ON" position immediately after it has been passed by a train, the station master controlling the signal shall take steps to put back the IBS signal to "ON" position and treat IBS signal failed and train shall be dispatched treating entire section between his station and station in advance as one Block section.

2.7 RUNNING OF MOTOR TROLLYS ON IBS ZONE:

i) While allowing motor trolly/4 wheeler tower wagon/material trolley etc., entire section between PDU- SGDM shall be treated as one block section and shall be issued **T-369 [3B]** for passing IBS at "ON" position.

ii) After the complete arrival of the said Motor Trolley/4 wheeler tower wagon/material trolley etc., at the station ahead, Station Master at adjacent station

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shall exchange Private Number in token of complete arrival and then shall resume normal working by resetting the Axle Counter as stated in the SWR.

iii) Motor Trolleys shall not be allowed on following line clear.

NOTE: - Backing of train on the portion of line after passing the intermediate Block Stop signal normally shall not be allowed, however, if it becomes inevitable to back, such backing may be done with great caution as mentioned in SR 3.75.04.

2.8 SIGNAL POST TELEPHONE:

A telephone socket (RE Type portable telephone kept with Loco pilots) with a RED Press button at the bottom is provided at the foot of each IB signal and is meant for Loco pilot to contact the DY.SS/SM in rear by pressing the RED button. The Loco pilot of the train encountering the IB signal at 'ON' position shall contact the station in rear to find out the occupancy or otherwise of the block section ahead.

3. NORMAL POWER SUPPLY TO IBS GOOMTY:

Normal power supply to the Signalling and Interlocking installation at the IBS goomty is drawn from the traction power sources (230V-50 HZ, AT1 and AT2) with auto-change over arrangement in IB Goomty through a panel. Whenever any traction power supplies fails, the auto-change over unit will automatically connected to the other available 'AT' supply.

STATION WORKING RULES OF PONDURU**EAST COAST RAILWAY****WALT AIR DIVISION****APPENDIX 'G'****PONDURU STATION****RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS**

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX- 'G'
TO
SWR
OF
PONDURU
STATION

STATION WORKING RULES FOR 25 KV A.C ELECTRIC TRACTIONPONDURU STATION YARD1. GENERAL & SUBSIDIARY RULES :

- i) The rules applicable to Electrified Section have been given in Chapter XVII of the General Rules and in the Subsidiary rules made hereunder for Electric traction. The General principles governing operation and maintenance of Traction Overhead Equipment, Electric Locomotives, Signal & Telecommunications installations have been given in the A.C. Traction Manual. These rules books and an extract of the relevant paras of A.C. Traction Manual, shall be kept in each station and yard office and all the staff dealing with staff working shall make themselves thoroughly familiar with the same (GR 17.01).
- ii) Brief reference to important rules required to be followed by Station / Yard staff in their day to day work has been given in this Appendix. These are, however, illustrative and not exhaustive.

2. GENERAL SAFETY PRECAUTIONS :

- i) All staff are warned that contact with or very near (within 2 meters, unless protected by a screen as per rules) to live portion of the 25 KV Traction Overhead Equipment is dangerous and shall be strictly avoided.
- ii) No work on overhead lines or in the zones within two meters, of any live equipment shall be carried out unless a regular 'permit to work' is obtained from the authorized Traction staff and line is made dead and earthed as per rules (GR 17.04) ACTM 20600 to 20619 Vol.II Pt.I.

3. SECTIONING DIAGRAM(Station Working Rules Diagram for Electric Traction)

- i) A Diagram No. WAT/TRD/SWR/240/12 indicating schematically the lines which have been equipped with for Electric traction is exhibited. The diagram also indicates different electrical stations (Sectors, Sub-Sectors or Elementary sections) the Controlling Switches (Isolator Switches or Interrupters) Insulated Over laps and Section Insulators where the over head equipment is electrically separated. The limits of an Electrical section (Sub-Sector or Elementary Section) and are indicated by relevant section. A copy of this diagram is also enclosed with these special working rules and will form part of the same.
- ii) For all purposes connected with train movements and power blocks, this diagram is the only authorized document to be referred to. The normal position of various switches is indicated on the diagram.

4. UNWIRED TRACKS : No electric locomotive with pantograph raised shall under any circumstances be taken to an un wired section.

5. OPERATION OF SWITCHES :

- I) All switching operations shall be carried out in accordance with the instructions of the Traction Power Controller except in respect of Switching operations for local blocks, which may be carried out by authorized traction staff, after they have been granted local block by the Station Master or Assistant Station Master accordance with GR 17.04.09 and ACTM 20600,20601, Vol.II Pt.I.
- II) "In case of emergency, Authorized and trained station staff may open Isolator switches under specific instructions of the Traction Power Controller (GR.17.04.14-B) with exchanging of Private Nos. to perform the operations of the following isolator switches as well as any other isolators within the station limits".

Sl. No.	Isolator No.	Loc. No.	Sl. No.	Isolator No.	Loc. No.
1.	SM-128	764/40	2	SM-129	764/37
3	SS-229	764/4A			

6. POSITION OF SWITCH HANDLES :

When a switch is in the closed position, the operating handle of the Switch is at the top.

7. LOCATION OF KEYS OF SWITCHES : The keys for the padlocks of various isolator switches are kept in the ASM's Office in a box with a glass mounted cover (GR 17.04.13). The Station Master shall daily check the locks on switches within the station limits and report any defect or deficiency to the Traction Power Controller.

8. PROCEDURE AND PRECAUTIONS FOR OPERATING ISOLATORS :

The procedure for Operation of Isolator Switches have been given in and GR 17.04.15 and SR 17.04.14 (b) which must be rigidly observed.

Isolator switches may be opened only after ensuring : -

- A) If the Isolator switch is on the main line that the adjacent interrupters on either end of Isolators switch have been opened.
- B) If the Isolator switch is controlling supply to yard lines, that either the Elementary Section controlled by the Isolator switch is free of raised pantographs of Electric Locomotives, on the Interrupters controlling the supply to the yard lines in question are open (GR.17.04.15).

9. POWER BLOCKS :

- i) The detailed procedure for obtaining Power Block has been given in (GR.17.04.02, 17.04.03 & 17.04.04) ACTM 20603, 20604, 20611, 20612 & 20613 which must be rigidly followed except in case of emergency.
- ii) The sequence of switching operations for granting and canceling the Power block for particular section, are included in the Annexure. These shall be strictly followed by all staff. Failure to follow the sequence indicated, is likely to lead to dangerous consequences. When any isolator switch is changed from its normal position, for staff to work in over head equipment, a danger board shall be exhibited on the switch with the caption "DANGER MEN WORKING". An adequate number of such Danger Boards have been provided at each stations.

10. PROTECTION AT THE TIME OF POWER BLOCK :

- i) All sections over which a power block has been granted shall be protected against the entry of Electric Locomotives with pantograph raised from either end during the period (GR 17.04) and ACTM 20620, 20621 to 20627 Vol.II Pt.I strict enforcement of longitudinal and transverse, protection as per the Annexure attached shall be ensured before imposing power block. If there is / are locomotive on the section over which the power block to be given, the Loco Pilot of such, locomotives shall be given a memo by the Station Master on duty or authorised Traction staff to lower the pantograph and not to raise it until further instructions and an acknowledgement shall be obtained. The Loco Pilots shall not be given instructions to raise the pantograph still the power block is cancelled.
- ii) Station master or station staff conducting shunting operation with electric locomotive will ensure that under no circumstances any electric locomotive approaches near the traction structure limiting electrical sections power with the power block may be granted. Limits of each electrical section at a station are shown in the station sectioning diagram.

11. SECTION INSULATORS : In order to insulate main and loop lines on different grid in the yard, cross over / turn out connecting main and loop lines or different grids of the yard are provided with section insulators, so that, when one line / or grid is made electrically dead and there be any fault on the same, the other line / grid is not affected. The speed of the electric locomotives with pantograph raised over such section insulators shall not exceed 50 KMPH subject to other speed restriction which may be in force. When one of two sections separated by a Section Insulator is dead, the pantograph of the electric locomotive on the live section shall not proceed closer than 30 feet (10 meters) towards the section insulator marking the end of the dead section.

12. BREAK DOWNS OF TRACTION OVER HEAD EQUIPMENTS : All the break downs or defects noted or reported on the Traction Overhead Equipment or any other traction equipment including bonding, shall immediately be reported to the Traction Power Controllers (GR 17.03.02) ACTM 20605 Vol.II Pt.I. Necessary caution order should be issued to the Loco Pilot concerned as directed by the Traction Power Controller observing the existing rules regarding issue of Caution Orders.

13. REGISTER OF MESSAGES : All messages relating to faults on the Traction over head equipment, operation of switches custody of keys of out-door switches and other important communications in connection with the operation and maintenance of Traction Overhead Equipment shall be recorded serially in a register by both the sender and the receiver indicating the time at which the messages are received or exchanged (GR 17.04.12) ACTM 20610 Vol.II Pt.I.

14. MOVEMENT OF OTHER THAN ELECTRIC TRAINS

Goods or Passenger trains hauled by other than electric locomotives may be allowed to pass through the dead section subject to the following conditions :-

(a) This has not been prohibited specifically in the power block message.

(b) Other than Electric trains hauled by such engines shall be brought to a stand at the station preceding the station/section at which power block is granted and the Station Master or this station shall satisfy himself by personal inspection that there is no electric locomotive in the train.

(c) He shall also give a Caution Order to the Loco Pilot of such engine or train, warning him of the power block ahead and instructing him to watch for hand signals and observe them.

(d) No Station Master shall give line clear or lower signals for a train to run over a section under power block unless he has received an assurance (supported by Private Number) from the Station Master of the preceding station that there is no electric locomotive or Inspection Car with pantograph raised in the train. (ACTM 20627 Vol.II Pt.I.)

Note : For purpose of this Rule a Dead Electric Engine dispatched as a vehicle shall not be considered as a Electric Locomotive.

15. ELECTRIC LOCOMOTIVE : Provisions included in A.C. Traction Manual must be completed with in case of double heading or banking by electric locomotive and precautions indicated therein must be complied with when dispatching locomotive ACTM 30636 Vol.III.

16. ESM : Any direct contact or close proximity to 25 KV line conductors is dangerous, the station ESM climbing up the Signal post for removing or fixing or cleaning the signal should not carry any long article which may accidentally touch or come in close proximity to live conductors. The ESM shall also be warned against bringing any part or body near live conductors.

17. WORK ON ROOF OF ROLLING STOCK :

No person shall climb on to the top of engine or tenders or on the roofs of carriages or wagons, when these vehicles are located beneath, overhead equipment except, when a regular ' permit to work' has been obtained from authorized traction staff and the overhead equipment is dead and earthed (GR 17.05 (02), at ACTM 10402 & 10403 Vol.I)

18. BLOCK INSTRUMENTS OR ANY OTHER ELECTRICAL,SIG.EQUIPMENT:

The Station Master or cabin man on duty must always watch for any unusual working in the Block Instrument or any other Signaling equipment which may arise due to voltage induced from the Traction system. The block instrument or the signaling equipment must be suspended whenever there is any signs of unusual working and the nearest Signal & Telecon Maintenance Inspector contacted to inspect and certify the same. In the event of break of catenary, the Station Master must immediately check up whether all block and Morse signaling equipment are working normal before permitting any train movement (ACTM 10430 Vol II)

19. TELECOMMUNICATION CIRCUITS :

The details of the Telecommunication facilities available on the electrified sections and the use of the same have been given to ACTM 10213, 10429 Voll, 20703 Vol .II Pt.I

20. ELECTRIC SHOCK :

The Station Masters shall exhibit prominently the instructions issued regarding the treatment to persons suffering from Electric Shock. In the Station, he shall ensure that all class-III staff are familiar with these instructions.

21. FIRE : Regarding Fire on or adjacent to any Electrical equipment refer GR 6.10 & SR there to

22. Nothing in these rules amends or supersedes any general or subsidiary Rules or instructions included in A.C. Traction Manual. These working rules shall be read as supplement to the aforesaid Rule books and also to the existing station working rules of the station.

23. AMENDMENTS FOR SUPPLEMENTARY CORRECTION SLIPS :

Any amendment to these working rules or any of the Annexure will be notified by Correction slip to the Station Working Rules. The correction slip will be serially numbered and it is the responsibility of SM in charge of a station to bring the contents to the notice of the staff concerned and take their acknowledgement.

24. CONTINUOUS WATCH BY INSPECTING STAFF : The inspecting staff of operating, Telecommunication and Traction Department , shall make regular checks at all points to which these special working rules are supplied to ensure that the rules corrected up to date and the staff concerned are fully conversant with the rules and abide by them.

NOTE : Whenever the codes "GR" and "SR" appear in these special working Rules please refer to the General and Subsidiary Rules for 25 KV A.C. Electric Traction, Chapter-XIX.

OPERATING STATION WORKING ON A.C. TRACTION AREA.

DO(s) AND DON'T(s)

A) FOR ALL STAFF :

(a) DO(s) :

1. In case of fire on Electric Traction equipment or wires
 - i) Inform Traction Power Controller.
 - ii) Extinguish Fire by Special extinguishers if available.
 - iii) Ensure no water jet is used under any circumstances.
2. Anything unusual on Traction wires or electric locomotives inform Traction Power Controller of nearest Station Master.
3. In any emergency speak to Traction Power Controller on emergency Telephone system (Sockets for connecting emergency Telephone) are provided at interval of approximately every Kilometer and defection to nearest socket is indicated on OHE Mast.

(b) DON'T(s) :

1. Do not approach within a range of 2 meters (Approx. 7 feet) of any traction wires on line equipment)
2. Do not work on or near Traction wires or any line equipment unless they are made dead, earthed and 'Permit to Work' obtained from an authorized traction staff.
3. Do not permit unauthorized persons to operate any equipment even if it be for making it dead.
4. Do not disturb any earthing bonding' or tractions wires.
5. Do not enter any switching station or remote control center unless specially permitted and accompanied by authorized Traction staff.
6. Do not attempt to turn the person in contact with live traction wire either by touching him or with the help of wooden bamboo pole or by grabbing his clothing or with the help of rubber gloves if or any other means. Under such conditions contact the TPC switch off the power supply and remove the person in contact with the live traction wire by using wooden bamboo pole on by grabbing his clothes or with rubber gloves if available only after ensuring from TPC that the power supply has been switched off.
7. Do not forget to give artificial respiration to the victim.

B. FOR RUNNING STAFF :

(A) DO(s)

1. Avoid slipping of wheels
2. Load coal or oil in loose outside the electrified zone only.
3. Keep a safe distance of two meters (7 feet) from Traction wires while working on the locomotives.

(B) DON'T (s) :

1. Do not lift or raise your tools towards traction wires, (keep the tools in their respective position immediately after use).
2. Do not load coal on the engine tender to a height more than 4 mtrs. above rail level.
3. Do not take electric locomotive with raised pantograph to any unwired line, power block working limit or near the section insulators at the end of section under power block.
4. Do not climb on the locomotive (of any type) on the engine tender for any purpose, while under traction wire unless power is cut-off and permit to work obtained (for watering, use the water column from the ground with the special device provided for this purpose and open tank over by the special devial device provided).
5. Do not place a steam locomotive with chimney directly opposite a traction mast or under any insulator or under bridge.
6. Do not allow long articles like fixing rod, shovel or any other thing to protrude above the engine while on electrified tracks.
7. Do not direct any jet or spray towards the traction wires (Jets of water, if necessary may be used horizontally of size the safety zone of 2 Mtrs (7 feet)).

C) FOR STATION MASTER :

(A) DO (s) :

1. Ensure all staff are conversant with safety precautions.
2. Report defects in traction wires or any electric locomotives of Electric Multiple Unit promptly to the traction power controller.
3. Keep sufficient number of button collars and ensure safety understand their use.
4. Ensure fitting of button collars to the points and signal buttons which give access to selection under power block.
5. Observe procedure given in Station Working Rules for 25 KV A.C. Electric Traction while operating Isolator switches.
6. Ensure safe custody of isolator switch keys.
7. Ensure that traction power staff protect sections from all directions by banner flag during power block
8. Suspend working of block and signals if single of unusual working are noticed always check block instruments and signaling equipment seen by breakdown in traction wires occurs.

(B) DON'T (s) :

1. Do not permit an electric locomotive or multiple unit with raised pantograph to approach any section under power block beyond (Power block) working limit or near section insulators.
2. Do not permit any crane to work adjacent to live with traction wires.
3. Do not permit your staff to approach live traction wires within the danger zone of 2 mtrs. (approximately 7 feet)
4. Do not permit electric locomotive with raised pantograph to enter any unwired section.
5. Do not take off signals for direct reception for any electric engine or train, if there is a power block within the adequate distance of the signal.

NOTE : This Appendix-G supersedes the previous appendix-G.

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ANNEXURE TO APPENDIX-G

STATION WORKING RULES OF PONDURU FOR 25 KV AC TRACTION THESE RULES SHALL BE READ IN CONJUNCTION WITH THE STATION WORKING RULES IN FORCE

S. No.	Description	Steps of precautions to be taken during power block in respect of Electric locos hauling trains or running light or standing with pantograph raised		Sequence of Switching operation for granting power block	Sequence of switching operation for restoring power
		Longitudinal Protection	Transverse protection		
1	2	3	4	5	6
A	SECTOR				
1	1) Sector between Ponduru/FS to Garividi/SP. (E/S 10002,10004, 10006 9802,9804 ,9806 on DN Line and 10101,10103 10105,9901,9903, 9905 & X-213 on UP line)	1) Movement of Electric trains/Electric locos shall not be permitted into section of Ponduru – Sigadam and Ponduru -Dusi on UP & DN lines.	1) Point No.21A&B shall be kept at normal position.	1) Ensure no electric loco is stabling with its panto raised position in the section. 2) Ensure that BM Nos. 94 & 95 are in open position at Garividi/SP 3) Open BM Nos.100 & 101 at Ponduru/FS	1) Close BM Nos.100 & 101 at Ponduru-TSS
2	2) Sector between Ponduru/FS to Urlam-SP on UP & DN lines (E/S 10301,10303, 10501,10503,10505. X-214 and 10202, 10602,10604&10606)	1) Line clear shall not be granted to Dusi for trains on UP line and UP reception signal shall be kept at 'ON'. 2) Line clear shall not be obtained from Dusi for trains on DN line and DN dispatch signals shall be kept at 'ON'.	1) Point No.21A&B shall be kept at normal position.	1) Ensure no electric loco is stabling with its panto raised position in the section. 2) Ensure that BM Nos.109 & 110 are in open position at Urlam/SP 3) Open BM Nos.102 & 103 at Ponduru/FS	1) Close BM-.102 & 103 at Ponduru-TSS

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1	2	3	4	5	6
B	SUB-SECTOR				
3	1) DN Sub-sector between Ponduru/FS to Sigadam/SSP on DN Line. (E/s.No.10002, 10004, 10006)	1) Line clear shall not be granted to Sigadam for trains on DN line 2) Line clear shall not be obtained from Dusi for trains on DN line 3) UP trains shall not leave from common loop of Ponduru Yard 4) Necessary reception / despatch signals shall be kept at 'ON'	1) Points No. 21A&B and 22A&B shall be kept in normal position.	1) Open BM-100 at Ponduru/TSS 2) Open BM No. 98 at Sigadam/SSP	1) Close BM-98 at Sigadam/SSP 2) Close BM-100 at Ponduru/FS
4	2) DN sub sector between Ponduru-TSS-Dusi-SSP (E/s. 10202)	1) Line clear shall not be obtained from Dusi for trains on DN line 2) DN trains shall not leave from Ponduru yard 3) DN Despatch signals shall be kept at 'ON'	NIL	1) Open BM-102 at Ponduru-FS 2) Open BM -106 at Dusi/SSP	1) Close BM-106 at Dusi/SSP 2) Close BM-102 at Ponduru/FS
5	3) UP Sub sector between Ponduru/FS to Sigadam/SSP. (E/s.10101, 10103, 10105)	1) Line clear shall not be obtained from Sigadam for trains on UP line 2) UP trains shall not leave from Ponduru Yard 3) Necessary UP dispatch signals shall be kept at 'ON' 4) Admission of UP trains to UP main line and UP loop line is prohibited and necessary reception signals shall be kept at 'ON'	1) Points No. 22A&B shall be kept in normal position.	1) Open BM- 101 at Ponduru/FS 2) Open BM-99 at Sigadam/SSP	1) Close BM -99 at Sigadam/SSP 2) Close BM -101 at Ponduru/FS

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1	2	3	4	5	6
6	4) UP Sub sector between Ponduru/FS to Dusi/SSP on UP line (E/s.10301 & 10303)	1) Line clear shall not be granted to Dusi for trains on UP line 2) Shunting movement is prohibited at north end of the yard on UP line 3) Necessary UP reception & shunt signals shall be kept at 'ON'	1) Points No. 21A&B shall be kept in normal position	1) Open BM-103 at Ponduru/FS 2) Open BM-105 at Dusi/SSP.	1) Close BM-105 at Dusi/SSP 2) Close BM-103 at Ponduru/FS
C	ELEMENTARY SECTIONS :				
7	1) E/s. 10002 between Ponduru/FS to SM-128 at location No.764/40 of Ponduru yard on DN main line, common loop of Ponduru yard (E/s. X-229 of ballast siding and shunting neck also gets blocked)	1) Line clear shall not be granted to Sigadam for trains on DN line 2) Line clear shall not be obtained from Dusi for trains on DN line 3) DN trains shall not be admitted into yard and shall not be despatched from yard 4) UP trains shall not be admitted / despatched to / from common loop 5) Necessary DN reception / DN despatch signals & UP reception / despatch signals for common loop shall be kept at 'ON'	1) Points No. 21A&B and 22A&B shall be kept in normal position.	1) Open BM-100 at Ponduru/FS 2) Open BM-98 at Sigadam/SSP 3) Open SM-128 at location No.764/40 of Ponduru yard 4) Close BM-98 at Sigadam/SSP	1) Close BM-100 at Ponduru/FS 2) Close SM-128 at Ponduru yard location No.764/40 of Ponduru yard

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1	2	3	4	5	6
8	2) DN E/s.10004 between SM/128 at location No.764/40 to SM-126 at location No.773/30 of Sigadam on DN line.	1) Line clear shall not be granted to Sigadam for trains on DN line. 2) Shunt movement is prohibited on south end of the yard of DN line beyond Point No.22B 3) Necessary DN reception& shunt signals shall be kept at 'ON'	NIL	1) Open BM/100 at Ponduru/TSS 2) Open BM/98 at Sigadam/ SSP 3) Open SM-126 at location No.773/30 of Sigadam yard. 4) Open SM-128 at location No.764/40 of Ponduru yard. 5) Close BM/100 at Ponduru/FS 6) Close BM/98 at Sigadam/ SSP	1) Close SM-128 at location No.764/40 of Ponduru yard. 2) Close SM-126 at location 773/30 of Sigadam yard
9	3) DN E/s. 10202 between Ponduru/FS to Dusi/SSP on Dn line section.	1) Line clear shall not be obtained from Dusi for trains on DN line. 2) DN trains shall not be despatched from yard 3) Necessary DN despatch signals shall be kept at 'ON' 4) Direct admission of DN trains on main line is prohibited.	NIL	1) Open BM-102 at Ponduru/FS 2) Open BM-106 at Dusi/SSP	1) Close BM-106 at Dusi/SSP 2) Close BM-102 at Ponduru/FS

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1	2	3	4	5	6
10	4) UP E/s. 10101 between Ponduru/FS to SM-129 at location No.764/37 of Ponduru yard on UP main, UP loop and Hot axle siding.	1) UP trains shall not be dispatched / admitted from / to UP main and UP loop 2) Shunt movement is prohibited on both ends of the yard of UP line. 3) Necessary UP reception dispatch & shunt signals of UP main & UP loop shall be kept at 'ON'.	. NIL	1) Open BM-101 at Ponduru/FS 2) Open BM-99 at Sigadam/ SSP 3) Open SM-129 at location 764/37 of Ponduru yard 4) Close BM-99 at Sigadam/ SSP	1) Close BM-101 at Ponduru/FS 2) Close SM-129 at location 764/37 of Ponduru yard.
11	5) UP E/s.10103 Between SM-129 at location No.764/37 of Ponduru yard to SM-127 at location No.773/21 of Sigadam yard. on UP line.	1) Line clear shall not be obtained from Sigadam for trains on UP line. 2) UP trains shall not be despatched from yard 3) Shunt movement is prohibited on south ends of the yard of UP line 4) Necessary UP dispatch& shunt signals shall be kept at 'ON'.	1) Point no.22A&B shall be kept in normal position.	1) Open BM-101 at Ponduru/ FS 2) Open BM-99 at Sigadam/ SSP 3) Open SM-129 at location No.764/37 of Ponduru Yard 4) Open SM-127 at location No.773/21 of Sigadam 5) Close BM-101 at Ponduru/ TSS 6) Close BM-99 at Sigadam/ SSP	1) Close SM-127 at location No.773/21 Sigadam Yard 2) Close SM-129 at location No.764/37 of Ponduru Yard

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1	2	3	4	5	6
12	6) UP E/s. 10301 Between Ponduru/FS to SM-131 at location No.755/33 of Dusi yard. On UP line.	1) Line clear shall not be granted to Dusi for trains on UP line. 2) Shunt movement is prohibited on north ends of the yard of UP line 3) Necessary UP reception & shunt signals shall be kept at 'ON'.	1) Point no.21A&B shall be kept in normal position	1) Open BM-103 at Ponduru/FS 2) Open BM-105 at Dusi/ SSP 3) Open SM-131 at Location No 755/33 of. Dusi Yard 4) Close BM-105 at Dusi/ SSP	1) Close BM-103 at Ponduru/FS 2) Close SM-131 at location No.755/33 of Dusi Yard.
13	7) E/s. X-229 Ballast Siding & DN shunting neck	1) No movements in Ballast siding is permitted. The relevant point shall be set against the entry of the train / engine.	---	1) Ensure no electric loco is stabling with its panto raised position in the ballast siding & DN Shunting neck 2) Open SS-229 at location No.764/4A of Ponduru yard	1) Close SS-229 at location No.764/4A of Ponduru Yard

NOTE :

1. For any unusual movement of electric locos the station master on duty must refer to the station working rules, Diagrams of his Station and ensure that there is no chance of energising the section where power block has been granted.
2. Points leading to unwired tracks shall not be used for movement of electric locos with pantograph raised.
3. Refer Drawing No.WAT/TRD/SWR/240/12.

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