

## Best Practices

Zone/PU: ER

Division/Unit: ASN

Area of Best Practice	Efficiency Improvement	Name of Best Practice	QR Coding of Point machine
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Details of Best Practice	<p>QR code based App (Google play store) named S&amp;T ASN ER with QR coding of point machine has been developed which enables to record various parameters of point machines at site during maintenance and during joint inspection by logging with individual ID and password which can be viewed by admin at any location and all main line points. All data entered at site are saved and secured online in server and are backed up by Web portal. All main line points , approx. 1200 nos. are inserted in it. Special Features:- (1) Various parameters of point machines such as voltage , current during operation of point machine can be recorded and stored and these data once filled in section cannot be altered. It can be viewed by Admin &amp; Inspecting officials. (2) Parameters of point layout , such as opening of point, gauge , condition of tongue &amp; stock rail , condition of packing etc. can be recorded and stored. (3) Deficiencies noted during joint inspection of point &amp; crossing can be recorded and stored . (4) Sr. DSTE/DSTE/ASTE can also super check and monitor progress of inspection and maintenance work of these pointmachines. If inspection is not done as per schedule ( monthly/quarterly/yearly) by SI/CSI/ASTE then SMS alert will come to Admin. (5) Report of number of machines dues/overdue and data of previous schedule inspection is also generated. In case of any failure, the last maintenance data can be checked by Admin. (6) All data entered at site, and saved and secured online in server and are backed up by Web Portal for minimum one year .</p>		
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Benefits Accrued/Impact	<p>(1) Through this QR coding point machine details and data entry by Signal Inspectors at site can be done with ease and will stored in server. (2) It will save more time during inspection and eliminate the lengthy paper work. (3) It provides ready to use data at any time and SSE/JE can use it for day to day maintenance work. (4) Officer/Admin can see data of point machine by using his mobile at any time at any place</p>		
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Contact Person for  
further details

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Area of Best Practice	Safety Enhancement	Name of Best Practice	Automatic Rolling-in Examination system
Details of Best Practice	New Automatic Rolling-in Examination system installed at Platform and Yards. This system monitors and records Hot Axle, Hot wheel and Hot disc during rolling-in examination without fail.		
Benefits Accrued/Impact	This has resulted in enhanced accuracy for detection of Hot Axle, Hot wheel and Hot disc. Centralised monitoring system performs the task at ease using state of the art technology.		
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Area of Best Practice	Expenditure Control	Name of Best Practice	Rolling-in light automatic Switch ON/OFF system
Details of Best Practice	"Wheel movement sensors have been fitted on tracks. After detection of movement, this system switch ON the Rolling-in lights on the track. After one minute of passing of last wheel of the rake, lights are automatically switched OFF."		
Benefits Accrued/Impact	This has stopped wastage of electric power and reduced electricity consumption utilised for Rolling-in examination lighting.		
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Area of Best Practice	Efficiency Improvement	Name of Best Practice	QR Coding for monitoring of maintenance of M&P items
Details of Best Practice	"All M&P items have been given dedicated QR code. All details of the M&P item can be fetched just by scanning it's QR code. Monitoring and updation of the machine status is being done through dedicated website and Mobile App."		
Benefits Accrued/Impact	Working status, breakdown and maintenance schedule due of M&P items is being monitored easily.		
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Area of Best Practice	Safety Enhancement	Name of Best Practice	"SCADA based DV Test bench RTR "
Details of Best Practice	<p>"This system will replace conventional RTR.</p> <ul style="list-style-type: none"><li>• This system is completely computerised.</li><li>• All DV/Rake Test operations are carried out in accordance with RDSO manual and performed without any human interference.</li><li>• DV/Rake Test certificate for each DV/Rake is automatically issued after testing.</li><li>• DV Testing time has reduced drastically with this system.</li></ul>		
Benefits Accrued/Impact	<ul style="list-style-type: none"><li>• All DV/Rake Test results alongwith operator's details are stored in its Database for future reference.</li></ul>		
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Area of Best Practice	Expenditure Control	Name of Best Practice	Installation of solar pipe lights as a part of day light harvesting.
Details of Best Practice	Solar pipe lights have been installed on the roof of the shed at various locations in 02 phases. Day light harvesting is the practice of use of windows, various openings, rooftops of workplace and reflective surfaces during the day in order to use natural light in the workplaces and provide effective internal lighting with maximum visual comfort eliminating unwanted element of natural light like heat and harmful radiations with considerable reduction in consumption of energy. It not only save energy but also beneficial for human health. Natural dynamic light helps to maintain hormonal balance and provides the benefits of vitamin D in human body which in a result enhances productivity. The entire system is totally maintenance free with longevity is almost fifteen years.		
Benefits Accrued/Impact	<p>"i)Improved illumination from 80 Lux to 320 Lux.            ii)Illumination level meets standard of lighting as per BEE standards.            iii) Energy saving            iv)Soothing working environment due to presence of natural light &amp; generated freshness &amp; finally improves quality of preventive maintenance.            v) No warm feeling.            vi)The installation is maintenance free.            vii)Long life span of approximately 15 Yrs.            viii)High coverage area.            ix) Saving of Rs.220752/- Approx. per Year."</p>		
Contact Person for further details	<p>Name: Sri Avinash Kumar            Designation: Sr.DEE/TRS/Asansol/ER            Contact No.: 9002023400</p>		

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Area of Best Practice	Efficiency Improvement	Name of Best Practice	Digital ETC
Details of Best Practice	Started smart class for the trainees, Computer based test , Safety Test Simulation Bench		
Benefits Accrued/Impact	Time saving and timely publishing of result , improving driving skill.		
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Area of Best Practice	Efficiency Improvement	Name of Best Practice	Fully Automatic App Based Valve System
Details of Best Practice	To scrap the requirements of valve man for valve operation and to minimize the water loss through manual valve operation, the concept of automatic valve operation system has been developed. In this system, sensor based valve are installed on each pipe going to specific railway colony and station which will be operated through app and opening/closing time of valve can also be fixed through app . Location:- Jamtara railway station and colony Installation cost:- approx 3.5 lakh, Installation		
Benefits Accrued/Impact	"1) Savings of manpower (valve man): two Valveman for day night duty at Jamatara station and colony. 2) Saving of money (in terms of valve Man expenses borne by railway) and time. 3) Minimize the water loss which occur through manual valve operation. 4) It can be operated through GSM mobile signals and through internet from a n y t i m e a n d a n y w h e r e . 5) Current valve status can be checked through app at any time.		
Contact Person for further details	Name: Sri Neeraj Kumar Verma Designation: Sr. DEN-II/Asansol/ER Contact No.: 9002023201		

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Area of Best Practice	Safety Enhancement	Name of Best Practice	Height Gauge Protection System at Asansol Division
Details of Best Practice	At level crossing, for OHE safety, height gauges are erected to prevent ODC from entering at LC which can damage the OHE as well as harmful for road vehicle also. automated warning system needed in this situation. However it has been noticed that many times due to ODC these height gauges h a s b e e n d a m a g e d . Installation Location: At LC20 in main line under AEN/MDP. Approx Cost: Rs. 98000.00/-		
Benefits Accrued/Impact	Height gauge protection system has been developed to detect such ODC vehicles well in advance and set off a signal to stop. This system generate the alarm and visual signals as an when an oversized vehicle come nearer to the height gauge and alert the vehicle driver as well as gateman that the vehicle is oversized and can not pass the height gauge. So we can protect the dashing of height gauge and damaging of OHE as well as vehicle too.		
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## Best Practices

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Area of Best Practice	Expenditure Control	Name of Best Practice	"Step towards environment-friendly sustainable development Use of un serviceable PRC sleepers for construction of platform surface "
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Details of Best Practice	<p>"It is firmly determined to follow the path of environment-friendly sustainable development. In this direction, several station platforms are being constructed (For making high level platforms or new low level platforms) by using unserviceable PRC sleepers in place of fresh concrete.</p> <p>Following stations/halts have been covered where PF surfaces have been made or are being done with the help of unserviceable PRC sleepers are as under:-</p> <ol style="list-style-type: none"><li>1. Sirsa halt- Low level platform</li><li>2 . Dhanpatdih halt - Low level platform</li><li>3 halt on MG line - Low level platform</li><li>4. Rajla halt - Low level to high level platform</li><li>5. Arjun Nagar halt - Low level platform</li><li>6. Madankata (MNC) - Medium to high level PF</li><li>7. Mathurapur (MUW) - Medium to high level PF</li><li>8. Ghorparan- High level platform</li><li>9. Narganjo- High level platform</li></ol>
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Benefits  
Accrued/Impact

Cost-effectiveness : Using of scrap PRC sleepers for platform surface is very cost effective and time saving methodology. This process involves approx 10 lakh cost saving (One third cost saving compared to concreting surface) for a platform (cost break-up:- concrete platform cost-approx 1000/- per square metre and PRC sleeper platform cost 400/- per square metre hence Rs. 600/- per sqm cost saving hence for one platform of size approx 400\* 4sqm involves approx 9 to 10 lakh cost saving). Hence, Asansol division already saved more than 30 lacs by constructing PF surfaces by using scrap PRC sleepers and going to be save further, where work of PF surface construction by using scrap PRC sleepers are in progress or planned in this year, approx 1.2 crore.

Lesser time consumption : By using Scrap sleepers, construction time of PF surface can be saved by more than 200% to 300%.

Longer durability : These platform surfaces which are being made by scrap sleepers, life is more than 50 years in comparison to concrete surface as these are much more durable in comparison to normal concrete surface.

Environment-friendliness : This process is also environment friendly in terms of using waste material and saving construction materials to be used in concreting process and this is also a solution of disposal of huge quantity scrap un-serviceable sleepers in Indian Railways.

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Area of Best Practice	Efficiency Improvement	Name of Best Practice	Deploying LiDAR technology to measure OHE parameters at turn-outs/cross-over OHEs without taking any block(neither traffic nor power)
Details of Best Practice	Assessment of OHE parameters at obligatory locations of turn out/cross-over OHE requires double line blocks which entail huge costs (approx. Rs.5 lacs per line per hour). Also the current practice results in wastage of manpower. With LiDAR tech based device and corresponding software,the tasks will be accomplished within 10 minutes without requiring any block resulting in min disruption to traffic and associated savings. Also it will result in efficient utilization of manpower.		
Benefits Accrued/Impact	A tentative savings of at least 77 crores per year considering 70% of total obligatory locations don't require adjustment of parameters post LiDAR based assessment. The savings pertaining to efficiency in manpower is not considered.		
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Area of Best Practice	Others	Name of Best Practice	Dynamic Train Escorting of Short distance Train over the Division
Details of Best Practice	To minimize the passenger crime over the Asansol Division we have started dynamic train escorting system for escorting of short distance Mail Express Train of the Division. 46 Nos. of Mail Express Trains are being escorted by RPF/ASN on daily basis including 04 Nos. ladies coach by lady RPF Personnel for better safety and security of passengers and their belongings. During 2020, Security Department succeed to apprehend total 07 Nos. of IPC criminals and arrested 659 Nos. of offenders under Railway Act.		
Benefits Accrued/Impact	To ensure the safety and security of passengers as well as women passengers, Children and senior citizen and also boost up their confidence for hassle free travelling by the railways.		
Contact Person for further details	Name: Sri. Chandra Mohan Mishra Designation: Sr.DSC/Asansol/ER Contact No.: 9002023700		

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Area of Best Practice	Revenue Generation	Name of Best Practice	Restaurant on Wheel
Details of Best Practice	Two over-aged MEMU coaches have been converted into a Tea bar and a multi cuisine restaurant which is first of its kind in Indian Railways at the time of its inauguration.		
Benefits Accrued/Impact	License Fee of Rs. 7 Lakhs accrued for one year and a new source of revenue.		
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Area of Best Practice	Freight Increase	Name of Best Practice	Operation of Hazratpur Siding
Details of Best Practice	<p>•Started operation from September, 20 after almost of 10 years of inaction. Coal from Gangaram Chawk and Barjore patches is being loaded by WBPDCCL through this goods shed. A total of 205 rakes of coal have been loaded from this goods shed so far. Presently, 3 - 4 rakes of coal are being loaded from this point.</p>		
Benefits Accrued/Impact	<p>This Goods Shed will boost up Divisional Goods Earning even further.</p>		
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Area of Best Practice	Freight Increase	Name of Best Practice	Baktarnagar Goods Shed
Details of Best Practice	<p>A new Goods Shed has been opened on 19.2.2021 at Baktarnagar in Asansol Division. The line was lying unused for quite long time as there was no traffic movement. Sensing the opportunity, Asansol Division under the BDU took initiative to convert this line as Goods Shed. The siding was commissioned on 6.1.2021 and first loading of sand rake started on 19.2.2021. It is a milestone achievement for Asansol Division as one new Goods Shed has been commissioned literally within no time and little investment. This goods shed has the potential of loading 20 rakes per month. It will also de-congest Raniganj Goods Shed which will help in smooth loading/unloading of general goods at Raniganj Goods Shed and ease out other movements in the Division as well. Sand, cement, stone etc. will be loaded from this Goods Shed. Surprisingly, this Goods Shed has come into effect within a record time of 45 days since the matter was conceptualized first and no physical expenditure was incurred to start loading from this Goods Shed. Merchants of this industrial belt, by putting collective Shram Daan, made ready the floor/wharf of the Goods Shed which was quite uneven and leveled the portion required for loading. Overall, this Goods Shed will boost up Divisional Goods Earning even further.</p>		
Benefits Accrued/Impact	<p>This will boost up divisional goods earning.</p>		
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