detailed discussions about the sections upon which traffic operation is by and large dependent, have already been made in the earlier parts of the study. It may reasonably be expected that the measures suggested at the appropriate places will mend some of the loopholes and will pave the ways for better out-turn from those sections. It is now proposed to step into the examination of the current practices of Traffic Operation Section so that prevailing deficiencies may be detected and corrective measures may be proposed. The operation is largely related to the actions taken by Indian Railways particularly in this context and therefore the studies, in the interest of greater effectiveness, will cover that aspect also wherever found necessary. Again, the relationship with Alloy Steels' Plant, a next door constituent of the parent organization, concerns traffic operation to a considerable extent and that point also will be taken into account.

Traffic Department is essentially a service unit. Deficiencies are certainly there, but always their roots are not to be found in this branch itself. The troubles are quite often found aggravated by either the Railways or the user units. A comprehensive study with room for all these points may be desired but, due to limited scope of the current study, it will be hardly possible to cover all these aspects in details. Their complete omission will, however, make the study meaningless. A compromise may be arrived at wherein the study will have its focus of attention on the problems internal to the branch although closely interlinked issues will be given due consideration.
Durgapur Steel Plant is a heavy industrial unit and most of its relevant necessities and despatches are weighty and quantitative in nature. Since the water-way is out of picture in this part of the country and since there is very minor role to be played by the roadways, most part of these jobs are naturally left to be done by the Railways. The primary function of the Traffic Department is to exchange the loaded Railway wagons for and on behalf of the whole plant. Effective co-operation is highly desired from the Railways for the smooth flow of service. The Railways are in no way controlled by DSP; but, ways and means must be found out to solicit proper co-ordination from the Railways. The Railway administration is essentially bureaucratic in nature and all the problems are not usually sorted out at the lower levels. In many cases, complicated matters are to be taken up at higher levels of administration in which case solutions are found only after a long time-gap. Since both the Railways and the DSP are completely government-owned, there should not be any impediment to work out a method for ensuring co-ordination between actions taken by them. But, if past experience be any guide, expectations in this respect must be restricted to so-called attainable standards. Any sort of over-expectation may only end with the repetition of past happenings, which are already alarming from the financial point of view (Annex - 1). The huge amount of yearly demurrage which is, on an average, on the increase, eats into the hard-earned revenues. Any sensible person, concerned or not, will be pained to realize the worst impact of the incidents and will surely speak in favour
of the need to overhaul the existing machinery to do away with this sorry state of affairs, once for all.

How the degree of efficiency or inefficiency of traffic operation is reflected in the financial picture of the organisation as a whole require a little bit of explanation at this stage.

The Railways are simply carrying the incoming trains upto the exchange yard and thereafter it is the exclusive responsibility of the plant system to draw them inside the works and to place them at the scheduled sites or to follow the directives from appropriate authorities. After unloading operation, the empty wagons are to be sent back to the Railways within the conventional free-time; otherwise, all sorts of extra detention will be subject to demurrage, the current trends of which is already too high (Annex - 1 & 2). The annual revenue statement of the organisation is thus adversely affected. Again, the costs of particular products also increase if the producing units are not supplied with requisite materials in time. Besides, the service system interlinks many complicated affairs concerning the production processes of the plant as a whole. All these minute details are not recorded, nor these are separately considered while computing the product costs. However, in course of the following discussion, attempts will be made to narrate them briefly in the appropriate areas.

The variety in the nature of the jobs done under Traffic Department stands in the way of a consolidated

1. The plant is a lossing organisation since very begining.
course of discussion. Sectionalisation according to exact nature of affairs is the right idea to deal with the matters effectively. Accordingly, the jobs done in the Traffic Branch may be charted out.

<table>
<thead>
<tr>
<th>Traffic Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inward Movement(A)</td>
</tr>
</tbody>
</table>

A. To carry the incoming wagons from the Railway Exchange Yard to scheduled sites inside the plant.

B. To feed the sister departments with requisite loco and wagon service.

C. To make over the outgoing empty and loaded Railway wagons to the Exchange Yard.

Now, it will be convenient to take up the annual action plan and personnel set-up of each of the sections.

**Executive Set-up.**

Superintendent

One Dy. Traffic Manager

One Asstt. Traffic Manager (Internal)

One Asstt. Traffic Mgr. (Commercial)

Four Traffic Officers.

One Traffic Officer


1. Superintendent is the head of the Traffic Dept.
2. Dy. Traffic Manager is the head of Operation Traffic Unit.
### Supervisory Set-up

<table>
<thead>
<tr>
<th>Internal</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl. No.</td>
<td>Category</td>
</tr>
<tr>
<td>1.</td>
<td>Controller</td>
</tr>
<tr>
<td>4.</td>
<td>Crew Supervisor</td>
</tr>
<tr>
<td>7.</td>
<td>Yard Foreman</td>
</tr>
<tr>
<td>8.</td>
<td>Asst. Yard Foreman</td>
</tr>
</tbody>
</table>

Grand Total of the No. of Supervisory staff set-up: 210 nos.

### Non-supervisory Set-up

<table>
<thead>
<tr>
<th>Non-supervisory Set-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl. No.</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
<tr>
<td>6.</td>
</tr>
</tbody>
</table>

Demurrage Section: 694

Number Taking Section:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>No. of Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Yard Master</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Yard Foreman</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Rd. No. Taker</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Wagon Recorder. I</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>Wagon Recorder. II</td>
<td>43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>No. of Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Weight-Cum Recorder</td>
<td>39</td>
</tr>
<tr>
<td>2.</td>
<td>Unskilled Worker</td>
<td>12</td>
</tr>
</tbody>
</table>

Wagon Recorder. I: 3

Wagon Recorder. II: 11

Establishment Set-Up.

1. Section Officer - 1.  
2. Office Superintendent - 1.  
3. Head Assistant - 4.  
5. Peon - 25.  
7. Repairman - 1.  
11. Cobbler - 1.  

Total of the section: 66.

Grand total of the Personal set-up: 1107 No.

The above sanctioned strength of manpower is reported to have been arrived after proper planning. The Traffic Department (Operational wing) is expected to carry out all sorts of schedules with the above manpower in hand. The strength, as the figures and the categorical split-up appears, is quite sufficient to cope with the expected jobs. But, it is rightly observed that efficiency never depends entirely upon the scientifically arrived at manpower alone. Actual performance largely depends upon the effective motivation of the manpower under dynamic leadership.

Action schedules of Internal Traffic Movement

1. To meet the requirements of traffic services in terms of loco, wagon, ladders and railcranes, etc, of the sister departments.

1. Courtesy: The concerned departments.
2. To follow through the utilisation of captive wagons, their availability and effective out-turn from the wagon Repair Shop.

3. To ensure planning and execution of disposal orders of rubbish, mixed coke, etc.

4. To ensure effective supply of scrap to steel Melting Shop.

5. To ensure fair tracks from Permanent Way Engineering Section.

6. To ensure proper placement of unloadable wagons.

7. To ensure proper placement of loadable Railway wagons for outward despatches according to the requirements of commercial section of the dept.

8. To ensure timely clearance of outgoing empty and loaded wagons so that demurrage is not incurred for extra hour detention.

9. To ensure agreed service to Alloy Steels Plant.

10. To ensure fitness of loadable wagons.

11. To preserve relevant records of movements.

12. To look after miscellaneous affairs that may appear from time to time.

Action Schedules of Inward movements:

1. To ensure correct forecasts of the arrivals of incoming loaded trains at the Ex. Yard.

Due to clear and close inter-connection in respect of their nature of operation between internal and inward movements, they are dealt with jointly.
2. To ensure effective loco-power so that ensuing jobs may be properly taken up.

3. To arrange for taking over the incoming loads in time, their weight, and marshalling them in the respective yards.

4. To plan for miscellaneous incidents that may appear in these courses from time to time.

Action Schedules of Commercial Branch:

1. To ensure liaison with the Railways in respect of wagon allotment and all other related matters concerned with this department.

2. To communicate the raw materials stock and needs to the Railways.

3. To watch over the working of exchange yard.

4. To arrange for the co-ordination between the production-planning and control department, the Railways and the despatch bays to ensure smooth flow of outward despatches from the plant.

5. To ensure timely clearance of outward loads by availing loco service from the internal side of the department.

6. To ensure availability of loco-service from internal side to place the loadable Railway wagons at the despatch bays.

7. To ensure effective service from the weigh-bridges and their scheduled maintenance from the supplier.

1. Courtesy : Traffic Department, Durgapur Steel Plant.
8. To preserve documentary evidences in support of both incoming and outgoing trains.
9. To ensure other relevant commercial activities in respect of traffic operation for the plant as a whole.

The broad out-line of the nature of activities done under this department has been given above and it is now proposed to deal with the current trends of operation step by step with a view to spot out the deficiencies and to sketch the remedial measures.

The importance of effective office administration to cope with any scientific operational procedures in any particular field deserves no special mention; although the current system, practiced in Traffic Department, is undoubtedly found less useful. The need for scientific documentation of the records of traffic movement both in the cases of incoming and outgoing trains most of which usually involve millions of rupees, has occasionally been felt to protect against any case of loss or damage. In spite of this fact, the affairs are being managed in a hopeless manner for years; although the system may easily be given a good shape simply by reorganising the current procedures. Division of the affairs into operation, commercial and establishment sections, is the right step in this direction. Personnel placement should be based upon the skill and experiences of individuals. Most of the jobs

in this department are practically techno-economic in nature and as such, the fair dealing of the affairs requires some sorts of technical abilities and that, in fact, may be attainable by practical working in a particular field.

Most of the goods transactions are conveniently routed through this department and their documentations are naturally very important for any future reference. Any sort of misfiling or misplacement of the records may lead to huge losses of plant revenue.

The filing system, as a matter of convenience, may be areawise and/or commodity based. Again, for the preservation of documents, the need for a scientifically arranged record room is always felt there. But this has not been practised there since the beginning and the valuable records are now found kept haphazardly here and there with every chance of their misplacement; inspite of the fact that a record room has already been constructed and kept idle for a long time. The Construction Division of the plant has not handed over the possession of the room; enquiring has revealed that the possession has not been given since there are other claimants also and the appropriate authorities have failed so far to arrive at a convenient solution regarding its allotment. The administrative practice, particularly in this instance, can not be appreciated in the context of creative approach in any particular field of operation. Instances of loss of

3. Reference to the discussions had with the concerned people.
valuable documents are not uncommon and it is surprising to note that the losses are still being sustained knowing fully their impact on the financial position of the plant as a whole.

There are on an average 54 office staff in this department including class-four category. Their current efforts are mostly found useless simply because of the ill-arrangement of the office jobs. A fair amount of such type of jobs, as a matter of practice, are being done by non-office staff, who are expected to do other jobs. The prevailing practices result in dislinking the jobs and lead to huge manpower loss in both the categories. Are the office staff inefficient? Then, what for they have been maintained so long there to inflate the amount of annual revenue expenditure? And, if the current staff are not found suitable; let them be spared to make room for more efficient men from other units. Whatsoever may be the reasons there, the lapse is surely of managerial category and that should not be allowed to continue any longer.

So, in the interest of better efficiency, the jobs are to be retained exclusively for the respective staff. Under the current practice executive-power is also found wasted to a considerable degree which may be easily avoid provided the persons do not bother their heads about office jobs where their interference is not at all necessary or desirable. Most of these jobs are of a routine type and the ultimate authority is, in fact, left with the head of the department or his deputy to take any decision. Men in the position of Office Superintendent or Section Officer should be delegated power sufficient to take appropriate decisions.
Dual control over petty affairs has given rise to losses of many kinds and this may be avoided if the senior and middle level executives do not unnecessarily poke their noses in office administration. There are jobs requiring their attention in the operational side which are left unattended or are at least improperly attended. It is a pity to find that majority of the executives in this department keep themselves apparently busy in running offices and they are always found seated in office chambers as if traffic operation is best managed from office chambers. They are rarely found in actual work spots which are spread, as a matter of fact, all over the plant. Their presence at work sites appears like "emperor's visit to the kingdom". Can anything effective be expected out of this sort of executive performance? This practice must be stopped if at all anything is effectively desired in this field of operation.

One more thing that usually strikes one's mind is that the delegation of authority and allocation of responsibility are not very clear there. Who is to manage or decide and who is to execute the decisions, are not distinctly made clear in most of the cases. It is as if every executive is meant for management and nobody is likely to execute the decisions. A complete mess is found in this context all over the plant. Should anything be effectively expected in this line of operation, clear allocation of responsibility along with delegation of appropriate authority is a necessary precondition.¹ There must be clear understanding as to who are to deal with the thinking part of the management and who are identified with the doing.

part of it.

There are a reasonable number of executives placed in the Traffic Department and they are mostly qualified with long experiences in their respective lines; naturally, a fair amount of effective service may be easily expected from them, provided they are properly utilised in action. Their proper utilisation requires management placement and planning of the highest order.¹

Proper acquaintances of line executives with their subordinates in action usually fosters better relations, eliminates illfeelings and misunderstanding and leads to a greater attainment of schedules.² In fact, manhour loss in such an atmosphere goes down to a considerable degree and as such the schedules are completed in time.

Current staff-management relations in the department is apparently found normal; but, that should not be considered an achievement of the part of management. The picture may completely change if everybody is asked to do his allotted jobs. In the present situation, individuals are required to exert at least 50% of their capacity and they are satisfied with the leisure.

The devotion to duty on the part of executives is a driving factor to attain the schedules in time.³ The responsibility of the executives to place themselves in the line of operation along with their subordinates to get the schedules done by them in time should be sincerely discharged.

Enforcing strict discipline is a pertinent factor here, but the means and mode must be uniform and fairly practiced in all the cases, so that nothing undesired is unnecessarily created. Again, facts must not be concealed and the disciplinary measures are to be taken as a simple course of relevant rules and regulations of the organisation and must not be guided by likes and dislikes of individuals or personal prestige or power on the part of an individual who ever he may be. The plant in consideration is a national organisation and it has been established for the welfare of the nation as a whole. Anybody, engaged in this plant in any capacity, is nothing more than an employee and he should project his job as nothing less than his responsibility to the nation. As a matter of executive responsibility, a fair atmosphere of dealing is to be created so as to expect a fair return from the opposite sides. Resentments may still be there on the parts of the victims; but men, responsible for taking action, must not allow any such incidents to escape action and the desired norms of relations will be gradually established only when the real picture will be clear to most of the employees.

Unnecessary paper proceedings is not a fair practice; it only may confuse the whole affairs. Concealment of facts never derives fair results and should, as a matter of principle be avoided to create a congenial atmosphere. Actual motive behind any incident is to be un-

earthed to consider the course of disciplinary measures, instead of taking prompt steps on the spot. Minor faults, normally occurring in the courses of day to day actions, should be carefully considered in the right perspective while awarding punishment. But, cases of wilful mischief or the incidents caused by negligence must be considered as the cases of gross indisctipline and properly taken into task without any fear of violence from any corner.

The discussions made so far in the context of management reformation in this department, may be taken as having general applicability in all the fields of the plant.

Now, in the next step, it is desired to take up the "man-management" problem of the department which usually appears as a confusing subject by itself and surely something more than mere "Personnel Management". Workers are human beings and nothing like machine cogs. Their behaviour varies from man to man, situation to situation and also from time to time. Pressure or fear of economic strain may casually derive some sort of convenient results; but, that can never ensure unfettered satisfactory results from them. Their behaviour both in the works and outside is always a subject of critical consideration; and a man may appear to be a successful industrial manager only when he equips himself with these qualities of judgement.

The personal qualities of the individuals working in the department are in general not so unsatisfactory; rather, to some extent, they are found really encouraging. But, their net out-turn is not as much worthful. But, the entire responsibility for this below normal performance

2. Ibid.  
3. Ibid.
must not be placed at their doors. The employees in general usually consider themselves as wage-earners and the employment is their means of livelihood. They are not likely to work up to schedules and that is why supervisory system has been introduced as an universal practice to derive actual service from them. It is the responsibility of the managerial system in a particular context to engage the workers in appropriate situation and to chase them although the processes to get the schedules done in time. This is something mandatory on the part of executive-responsibility. But, it is not also expected that workers are always unwilling to work and if that situation prevails for a long time, the lapse may be taken to be managerial failure. The instances of similar failures are quite abundant in this department. Systematic distribution of schedules is a rare instance there. Most essential element for smooth steel traffic operation, as the matters appear, is a fleet of well-managed staff. But, workers here seek change in their working atmosphere at intervals. Monotony in a particular situation leads them to behave in this way and the work-load is not found similar in all the cases around it, naturally, a man in the heavier section will usually seek change to a lighter site in a regular rotation and anything done otherwise will automatically lead them to agitate; they get frustrated and the human-output, in fact, usually goes down to a considerable degree. The rotation

1. Ibid.
2. Roethlisberger and Dickson - Management and the Worker, 1939.
system, usually practiced there, is not at all satisfactory and it is found based mainly upon some whimsical personal factors of the executives concerned. Man from a hazard area is found transferred to another hazard site and the people in non-hazardous areas are found placed there for years together. It has been argued that to meet the critical affairs, experienced men should only be placed in the difficult areas. But by that it is not implied that others need not acquire experience in hazardous jobs. It is as if the current people were born experienced and they will continue to suffer for ever. Any sensible man will get automatically tired to think about the future of the plant if such a phenomenon is continued there any longer.

The entire schedules of the department lend themselves to clear demarcation into specific areas of operation likely to be carried out by specific category of workmen and there is very little room for confusion. A broad outline thereof may be given here to have a better understanding of the affairs now dealt with in this area.

A. The Control Room - the nerve centre of the system - is manned with specific categories of workmen and executives as well.

B. Yard controls are also manned in the similar ways and they have regional liberty to work in their areas.

C. Locomotives are operated and supervised by specific categories of staff.

D. Shunting jobs are done by porters and jamaders being supervised by loco-supervisors.
2. Other areas of operation are also managed by specific category of staff, viz, Number Takers, Demurrage people etc.

With the above clear specifications of the areas of operation, it is rather surprising to note that the chaotic situation is continuing there so long. Locomotives are found starting usually later than expected. A fair amount of costly loco-hours are thus lost inspite of the fact that there are a sufficient number of persons to look after this affair. A comprehensive study has been made by the Industrial Engineering Department of the plant specifically in the Blast Furnace areas to ascertain the trends of losses in this context (Annex - 23). In fact, this is simply an unfair practice continued by the loco staff. Inspite of the fact that it is known to every one of the department, no corrective measures have ever been taken up to prevent the recurrence of such losses for years together. The loco-operators, in fact, need not take prior guidance from any source, so that the delay may be explained away; their responsibility is specific and the loco-staff are controlled and guided by the unit-supervisors. The unfair practice can continue due to the poor state of supervision. Nobody seems concerned with this affair. But, the loss, as computed below taking the appropriate figures from Annex-23, Sl.-3., is very much discouraging and it affects the overall corporate financial state of affairs.

Calculation of the cumulative losses due to late start of locomotives in BF area(1.12.75).

1.Courtesy: Blast Furnace Dept., Durgapur Steel Plant.
2. Courtesy: Coa-t Section, RA Branch, JSP.
1. Loss of loco-hour = 12 hrs. 10 mts.
2. Cost of loco-hour lost @ Rs. 120.00 = Rs. 2190.00.

Again, if charging and or tapping the furnace has suffered:

3. Daily average furnace production = 1320 M.T.
4. Hourly loss of production = 55 M.T.
5. Cost of production lost @ Rs. 7.20 = Rs. 39600.00
6. Loss of hourly furnace fixed cost = Rs. 6670.00

So, the total hourly loss comes to

\[(2 + 5 + 6) = Rs. 46450.00\]

Again, with regard to Sl-4 of Annex-23, it may be found that loco-hours are also lost due to early departure of the locos from works'sites. The loss in this direction, as given below, is also not negligible.

Loss caused by early departure of locos in BF areas (25.12.75):

1. Loco-hour lost : 10 hrs. 35 mts.
2. Cost of loco-hour lost @ Rs. 120.00 = Rs. 1905.00.

Again, if charging or tapping the furnace has suffered, the accumulated loss will appear as calculated above.

In fact, it is found from all the cases above that the loss sustained due to loco-hour lost is not a loss by itself, but it may easily lead to many other types of loss with simultaneous adverse consequences in the working of

1. Courtesy : Cost Section, EA Branch, Durgapur Steel Plant.
the sister units as the plant schedules are continuous system of operation. In the instance of a loss in Blast Furnace production, the repurcussion is usually continued up to finished product stages, i.e., Rolling Mills and the consequences appear as below:

1. Cost of loco-hour lost = Rs.180.00 (+)
2. Cost of BF hour lost = Rs.46450.00 (+)
3. Cost of PCM hr. lost = Rs.12700.00 (+) Av.
4. Cost of SMS hr. lost = Rs.56200.00 (+) Av.
5. Cost of Mill hr. lost = Rs.25,300.00 (+) Av.

The loco-operators and their assistants are very seldom found checking their respective units at the beginning of the shifts, which is mandatory on their parts. Many loco-hours are frequently found lost with all the ill consequences in the middays simply due to not following the schedules of watering, fueling, etc., which are, in fact, supposed to be done at the beginning of the shifts (Annex-7). These are the clear instances of insincerity on the parts of both the operators and their supervisors including the shift executives, who are likely to be careful and strict in dealing with all these regular and habitual negligences. Again, one most funny thing is that the operators in most of the cases, are altogether ignorant about the mechanism of the locos and usually fail to detect even the very minor nature of faults; the maintenance staff, on the other hand, are to face tremendous difficulties to attend call at the yards.

The operators in the Railways and even in Tata Iron and Steel Co., are fairly equipped with this sort of quality and they in most of the cases of minor troubles, do

1. Courtesy: Cost Section, FA Branch, DGP.
the jobs themselves. It is interesting to note that no attempt has ever been made to instruct them in this way. A comprehensive programme, as devised below, may be a convenient way to get the DSP operators acquainted with the ABC of loco-maintenance.

a). The standby and reserve operators and the assistants are to be stayed back in the maintenance shed to observe and to help the maintenance jobs as a regular feature.
b). Similarly, the operators and their assistants in a troubled unit at the yard, should observe the maintenance procedures.
c). A log-book system is to be introduced in each of the units to record the conditions at the end of the shifts. The notes in details will have to be noted by the operators, the assistants and the unit supervisors in the following shifts.
d). The persons mentioned above will, in due course, have to take the responsibility of specifying the nature of troubles in each unit to the maintenance staff, so that unnecessary waste of time may be considerably eliminated.
e). Private number system like those of Railways may be introduced to locate the responsibility of delayed maintenance of the units.
f). To avoid unnecessary diversion through a long channel, the engine requiring care is to be stationed either at the shed or on the local
pit according to the direction of the maintenance people depending upon the nature of the trouble being informed by the unit operators.

g). The relieving operators as a matter of practice should regularly go through the unit log-book to know their unit condition and to ask for relevant remedial measures before the beginning of their shift.

h). The units must be properly manned all through the shifts.

i). Safety measures must be adequately maintained.

j). The units, being found all right, will immediately start for business.

The availability of loco-hours, in fact, will surely go up to a considerable degree in due course, provided the above steps are properly taken into account. Again, locos, in frequent cases, are not made available in time inspite of the fact that these are quite all right at the moment and their services are urgently needed. As has been demonstrated loco-hour loss entails a huge accumulated loss. It is, therefore, desirable to detail responsible shift people at the starting bays at the beginning of the shifts to avoid unnecessary starting delays. Again, the loco units will be taken back in the bays only when their schedules are over and thus undesirable early departure from work spots which hamper the schedules may be largely eliminated.

The loco log-book, mentioned earlier, should be a weekly one and it should be scrutinised frequently by all responsible persons who will append their notes and comments as to the nature of troubles as also their advices
regarding remedial measures.

Nevertheless, it should be mentioned here that proper utilisation of the available loco hours largely depends upon the effective supervisions both in the respective yards and in the units themselves. The nature of supervision, needed in this respect, depends largely upon the practical experiences of the staff concerned. No other single factor is practically found so much effective for this purpose and to that direction, thorough idea about the plant and track lay-out, characteristics of the rolling stocks, and their nature of movement and services has no effective alternative. Practical experience being punched with initiative, drive and dynamic leadership quality may only derive satisfactory results. The quality of the leadership is a major criterion here. Although the nature of job in the loco units does not confer on the supervisors a purely executive status, the importances attached to these jobs give them an almost allied status. The individual qualities of these personnel are the subject of special consideration and make them the standard supervisors. Although their average out-turn is not so discouraging, but there is tremendous scope for improvement. A comprehensive supervisory development programme, as noted below, may lead the idea into success.

a). The loco supervisors are to diarise all the information available to them in a log-book right from taking initial instructions either

from Central Traffic Control or from the concerned yard controls. They will initiate timely starting of their respective units and make note of it in details in their log-book, so that any sort of loco-hour lost may be located with specific reasons thereto. They will keep constant touch over area telephone with the controls to give take informations about their respective units in operation. Every completion of schedule should be noted in details in the log-book and be relayed to the controls so that surplus loco-hours, if any, any where, may be utilised in deficit area. Taking and giving informations should better to be noted under private number system to locate specific responsibility. The logbook in consideration, will be moving round the clock from shift to shift for a week so as to enable all concerned to have a look into the whole affairs and at the end of a week, it should be systematically preserved for any future reference.

Area control is the most sensitive means of effective traffic control and a Yard Master is held responsible for the control of a full yard. The question of the sincerity and devotion to duty on the part of Yard Masters in discharging their responsibilities needs hardly any specific mention. They are likely to be very alert industrial leaders. Most of their duties are not of a routine type, rather these are practically sporadic in nature and as such individual initiative any alone derive a satisfactory result in
any case. They are desired to report in duty slightly earlier than the schedule so that face to face conversation between the incoming and outgoing man may take place as a means of direct and effective communication. This may give more information about the problems left behind than what could possibly be noted in the area diary. Early arrival of the Y.Ms will also make possible the proper management of staff affairs under them. The area-diaries, mentioned above, should be moving from shift to shift round the clock for a week and be maintained like those of loco-supervisors.

c). The control room, in fact, is the nerve centre of traffic operation and every information is usually routed through it. Responsible shift people are usually posted there and for the sake of effective communications with all areas of the plant and for outside communications, the room needs to be equipped with better telephone system. Although in counting the numbers of telephones connection appears impressive, but in fact their service is not good enough to meet the ever growing needs of the centre. The need for a better communication system is always felt there. A radio-telecommunication system was previously installed there, but on the flimsy ground of being the chances of its stolen, the system has already been lifted without making any alternative arrangement. The system was a
direct one connecting all the running locos in the yards and was found in a very effective u... It is very astonishing to note here that such a system is now being operated in GS control for communicating with senior executives during day hours only. GS Control being located inside the works, the chances of theft are also likely to be applicable there. Is it proper to state that the Traffic Department is the only insecure place in the works? Or, are the traffic-people not trustworthy? Again, what for such an army of security force is being maintained? It is high time the entire matter is reviewed and the system is brought back in Traffic Department for the greater interest of the plant as a whole.

The diary system, now in operation, is rightly practised in, but a private number system, as advised in other sectors of this department, may also be introduced here.

The "Private Number System", which is now being utilised in the Railways, is found very effective in locating sectorial responsibilities in minor affairs for avoiding the unnecessary paper work, which is already in alarming stage all over the plant. The introduction of such a system will also eliminate a fair amount of expenses in this head of accounts and undesirable waste of valuable operational hours in between.  

1. Gottschalk A.W - The process of plant productivity barg
The introduction of all the above reformatons will surely inspire a far better traffic service all over the plant and the plant as a whole, in due course, will be inspired to attain its schedules in time. The over all impact will be largely felt in the annual financial result of the entire organisation. It is now desired to step into the minute details of the sectorial operations so that critical affairs may be rightly taken into account.

**Internal Traffic.**

The next course of the discussion will be concerned with the problems of internal traffic movements and the remedial measures thereto. Among the incoming loads, the raw materials constitute the major figure; but before going into their details, it will be convenient to take up the working of Railway Exchange Yard which assumes supreme importance in the course of all incoming traffic movements.

**Durgapur Steel Ex. Yard (DSEY).**

Goods traffic to and from the plant is exchanged with the Railways in the DSEY, located at the western end of the works (Annex - 21). There are 8 reception and 8 departure lines with one inbetween engine run-round line. On arrival, the vacuum connection is released from the incoming trains and three hours time is reserved exclusively for this purpose, after which the arrival time is usually calculated for any purpose. The responsibility of the plant traffic system is, thereafter, to draw them inside the works and it is surprising to note that jobs are rarely started in time (Annex - 24). The average delay was found to be
2.4 hrs in March '75 and it went upto 8 hrs in Oct. '75! This is surely an worst instance of managerial deficiency and deserves immediate attention in the greater financial interest of the organisation.

The forecast of all the incoming trains, reserved for the plant, as a matter of practice, is relayed to this end by the Railways quite in advance of the actual arrivals. Noting the time of arrival and taking proper measures for drawing the rake should be the right course of action but in many cases, measures are not taken up in time to meet the situation. Again, sometimes the Railways are found to fail to give information in time so that adequate measures may be taken up in time. Certainly, a fair amount of time is usually taken by an incoming train to cover the distance between Asansol and DSEY and if only a bit of sincerity be there both on the parts of the Railways and the plant, information of the approximate arrival time of the incoming trains may be easily obtained much in advance. However, it is not the implied responsibility of the Railways to do it; they should be insisted to do it in the greater interest of the national economy and there should be no bar to press the Railways to take this burden since both the organisations are government owned. But, it is the specific responsibility of the plant authority to introduce a system so that the informations may be had in time and to that direction it is advisable to depute specific personnel at the DSEY whose responsibility will be to look after these affairs to do the needful so that other organs may be kept ready to match the programme properly.

1. Courtesy: Traffic Department, Durgapur Steel Plant.
When the arrival information of the incoming trains is obtainable in time, the plant locomotives are to be made available in time so that unnecessary delay is not caused any further in this direction. In fact, locomotives are always kept reserved for this purpose and mere adjustment of their movements may easily derive a far better service in this direction. A fair amount of expense incurred in paying avoidable demmurage in this particular head of accounts may thus be largely eliminated.

Again, a plant locomotive is capable of drawing around 24 BOX or 60 KG type wagons at a time. But, an incoming rake is usually formed with an average 40 BOX type wagons and as such a rake is now to be drawn in two lots which automatically leads to additional movement, extra expense on account of loco-hours, additional detention of the loads and increased line occupation in the way of various cross movements (Annex. - 26). It is highly desirable to draw a full rake at a time to avoid so many consequent losses. So long as the plant doesn't acquire a better capacity engine, capable of taking the entire load, coupled double-engine drawing system may be introduced to meet the situation. However, better capacity units, as a long term measure, are to be purchased to match the programme properly. An alternative arrangement may be attempted with the Railways to draw the incoming rakes upto the plant stabling yard with their locos for which an agreed hire-charge may be paid to them.

A Railway steam-engine is already working in DEWY to dress the trains. Arrangement may be made to avail this service to draw the loads to and from the plant; however,
the plant engine, on the other hand, will, as usually, carry the dressing affairs at their yards. Such an arrangement may help both these organisation, by avoiding as many consequent losses and troubles.

Movement of Incoming Loads.

The plant procures various types of raw materials from all over the country to meet its schedules of production. Very rarely any item is imported; and in any such case, the quantity never constitutes any major figure, so that their gravity may be given any specific consideration specially in the context of this discussion. We may concentrate only on those items, arrivals of which are very frequent in the yards and usually constitute a major part of the total inward traffic movement.

Annual Raw Materials Needs of the Plant.

<table>
<thead>
<tr>
<th>Item</th>
<th>1 M.T. stage (Tonnes)</th>
<th>1.6 M.T. stage (Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Coal</td>
<td>-</td>
<td>22 lakhs.</td>
</tr>
<tr>
<td></td>
<td>SMS grade</td>
<td>1.5 lakhs.</td>
</tr>
<tr>
<td>3. Lime Stone:BF grade</td>
<td>-</td>
<td>5.5 lakhs.</td>
</tr>
<tr>
<td></td>
<td>SMS grade</td>
<td>0.62 lakhs.</td>
</tr>
<tr>
<td>4. Dolomite</td>
<td>-</td>
<td>0.72 lakhs.</td>
</tr>
</tbody>
</table>

The items are desired to be taken up one after another in details for their varying nature of movements towards the plant with the consequent impact on the whole phase of internal traffic movement.

Coal.

Among the incoming items coal is the single largest quantity and, in fact, appears as the prime need of the plant. Geographically the plant is conveniently located within 10 km to the east of Andal Railway Yard, which is regarded as the largest coal pilot yard in the country. The plant, as per agreements, gets its steam and cooking coal from Khoris and Bansajora sections of Rasunda depot of Jhoris coal fields in Dhanbad Railway Division. The medium and blendable coal, on the other hand, come from Laikdih, Chanch and West Victoria sections of Barakar Depot in Asansol Railway Division. Unlike other units of Hindustan Steel Limited, DSP has its captive coal washery and hence the main supply of washed coal is usefully maintained from its own source; however, the casual deficits are normally supplemented from Patherdih Washery in Dhanbad Division. The supply and movement of coal to the plant, in most of the cases, are found very erratic in nature leading to complicated inconveniences in terms of traffic movement which have greater repercussion on the production phases of the plant as whole.

Nature of coal supply
(In tonnes)

<table>
<thead>
<tr>
<th>Source</th>
<th>January '75</th>
<th>February '75</th>
<th>March '75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patherdih Wash Coal</td>
<td>17600</td>
<td>13090</td>
<td>20020</td>
</tr>
<tr>
<td>Jharia</td>
<td>77176</td>
<td>81586</td>
<td>65670</td>
</tr>
<tr>
<td>Barakar</td>
<td>23100</td>
<td>19563</td>
<td>21560</td>
</tr>
<tr>
<td>Other Sources</td>
<td>26400</td>
<td>13068</td>
<td>26400</td>
</tr>
</tbody>
</table>

1. Court y: Raw Materials Dept., Durgapur Steel Plant.
The coal rakes after they reach the exchange yard, are usually drawn by plant locomotives over the inward weigh bridge to the pretippler lines via inward departure line. 

Since the coal wagons are of varying types, marshalling them according to each type, in the interest of further processing in an appropriate type of tippler, is needed before the tippling operation starts. Three types of tipplers are there for this purpose, each of which is specifically designed to tipple certain type of wagons. But, covered wagons like BCI and CRT, on the other hand, are not possible to be tipped by either of those tipplers and in those cases, manual unloading is to be done. The tippleable wagons, being placed over the pre-tippler lines, are likely to be drawn with inhaul beetles over the tipplers, a system specially designed for this purpose. But, in most of the cases, these are not found in operation and the drawing are constantly done by utilising cashly loco-power. This is a clear instance of misuse of loco-power, in spite of the fact that the beetles may easily be made always available, provided these are put under a comprehensive maintenance programme. When the plant has a large well-equipped maintenance organisation, this sort of simple responsibility may be easily taken up. Again, the tipplers are not required in operation although the days and in fact, there is always sufficient free-time available to take up the maintenance jobs. This is surely a worst instance of insincerity and lack of comprehensive programme that speaks about the lack of scientific managerial practice, which requires

immediate renovation in the greater interest of the plant! In fact, it is really shameful to note that Indian Public Sector Undertakings are hardly tuned according to the growing needs of the exiguous situations and that is most probably the leading cause of their failure. The severity of such affairs is rarely understood in time and as such the organisations are caused to suffer for years together due to this lack of foresight. Here also the average number of various wagons, now being tipped in a particular period, may partially make the situation clear which is essential for drawing better programme; but nothing is specifically known or recorded about the waste of loco-power in this way (Annex - 17).

The plant needs around 270 coal wagons in terms of 4-wheeler to meet its 1 MT production schedules and the figure stands around 432 nos. in case of 1.6 M.T. production target.

The BOX tippler is rated to execute 12 wagons in an hour which accumulates to 168 wagons in only 14 hrs. a day after providing daily 10 hrs. for normal maintenance, change of shifts, etc, and the provisions already appear fairly high and has been traditionally practiced due to improper management and still the units are hardly made available as and when required. The available hours are also not properly utilised and around 80 BOX wagons are usually tipplead and there is no logic in support of such a low standard of performance. When the daily time-reserve for

maintenance is unusually so high, it is rather surprising to note that the actual out-turn is terribly low. Both the operation and maintenance sections of the tipplers usually put their own arguments in support of their inabilities and each of them is in the practice of putting the blame on the other to get a lame excuse. But, the spot of real troubles is to be found out so that instant remedial measures may be easily taken up. It appears that the inefficient management is responsible for all these troubles; otherwise such an insincerity could not perpetrate so long. At present, only around 50% of the currently rated capacity is availed in practice when the plant deserves a far better service from this unit to pile up a convenient coal stock to face its schedules of productions. With all these minute details of the prevailing situation, it may be safely said that nothing is to be searched out to take the plant out of these troubles; the purposes will be served only when the prevailing managerial procedures will be scientifically made job-oriented. Many committees have been formed; so many programmes have been adopted to warm up this sick child of the nation; but, it is really pathetic to note that none of the measures taken so far, has come to be of any practical use; It is most interesting to note that the academic attainments of both the workers and the executives of the plant are of high order as compared with any other organisations. Again, the plant is already around 20 years old and the working personnel have naturally acquired a fair deal of practical experiences in their respective sphere of operation; but, still the outcome is really far below expectations. After the detailed discussion made about the problems, it may be safely said that the troubles
'or originate from operational management procedures. It has rightly been emphasised in a recent editorial column of a Bengali Daily that practice is ever greater than the theories and this truth has been given due importance in People's China.

The plant authorities, however, expect that the current state of affairs will take a turn for the better with the arrival of another BOX tippler, which is, at present, under construction. But, if the present conditions are carefully scrutinised, it will be easily found that the current trends of performance may be largely improved simply under a little bit of enthusiasm. The plant needs nearly 432 coal wagons per day (in terms of 4-wheelers), provided the annual production target is staged at 1.6 M.T. and in terms of BOX wagon, the number of wagons will be nearly 173. But, all the coal wagons received do not belong to any single category and it has been found that nearly 50% of the coal wagons are usually BOX type; then the actual figure of the coal wagons needed to meet the 1.6 M.T. production target, will appear as around 86 nos. per day. If the average figure even goes up to 100 BOXes per day, it will be well within the current tippling capacity after providing present allowance of 10 hrs. per day for maintenance and other affairs. Thus the average wagon detention in this head of account (Annex - 17A), which is not found at all justifiable, may be easily brought down to a minimum and in due course, the urge of building a coal stock, which is long being felt by the plant, will come out of dreams.

3. The conclusion has been arrived in consultation with the concerned plant authorities.
Again, the coal, received in covered wagons, also gives some sorts of troubles in their current tipping processes. The end rock tipplers used for this purpose, fail to get the wagons fully unloaded and about 1 to 2 tonnes of coals is usually left in the wagons which, at present, is subject to manual unloading process by the side of empty coal tipplers lines. A fair amount of additional detention of these wagons is thus caused. Again, BOX, CRT and defective covered wagons, which can not be tippled due to technical inconveniences, are also subject to manual unloading process, giving rise to their extra detention in this way. A ground conveyor system may be largely useful in this process, which is to be installed between line no.4 and 5 on the post-tippler side connected to covered and KC tipplers, so that residual and other coal, now being manually unloaded, is not piled up at the present site, but may be straight away channelled either to the washery or to the beds. It will eliminate the current high expense of double manual handling. The proposed instalment will not only help in this way; it will also work as a useful standby arrangement when the tipplers will go out of order.

The manual unloading jobs are now mostly done with contractual agreements and these sort of operations are allowed only during the day hours and that is also one of the major reasons of so high detention of those wagons. This is not a practical method for continuous type of jobs. Instead the clock working system, which was in practice previously:

will have to be reintroduced to get out of these woods. Plant authorities are however not in favour of reimplementing this process on the ground that the security of the plant may be endangered. It can't be accepted a proper reason for not allowing contractors' labours to work round the clock. It should not be supposed that miscreants are only provided by the contractors. The plant already maintains a large security force and a large vigilance wing in addition to other national security measures. Again, whenever anybody is allowed entry inside the works for any purposes, he is provided with security pass alike the company employees. In fact, any harm may be done even by an employee of the organisation itself, if he is so motivated and then it is not practically desireable to keep away those unnecessarily suspected contractors' labours, when their round the clock service is considered essential. The security measures, if so felt, may be conveniently tightened. This will not be the only instance in DSP, it is already in operation in other government and non-government industrial organisations all over the country and nothing in the nature of incidents apprehended has been heard from any corner. In fact, such a system was in operation in the early days of this plant itself and it was found quite effective and nothing unfair was reported. If, however, the systems is not at all acceptable to the plant authorities, the way of getting these works done by the contractors during day hours alone must be stopped and the jobs should be continued round the clock by the trusted employees of the plant.

How the instalation of the ground conveyor may finanically help the organisation, is accounted below to scruti-
-mise the case in greater detail.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cost of clearing damage to field</th>
<th>Total cost</th>
<th>Unloading / Effective cost savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/75</td>
<td>6144</td>
<td>8456</td>
<td>14600</td>
</tr>
<tr>
<td>6/76</td>
<td>7576</td>
<td>7240</td>
<td>14816</td>
</tr>
<tr>
<td>6/77</td>
<td>5720</td>
<td>8784</td>
<td>14504</td>
</tr>
</tbody>
</table>

N.B: Net savings in 3 months = Rs 30364.2

And, monthly average = Rs 10121.4

So, average annual savings = Rs 1,21,456.00 (In round figure).

It is, therefore, obvious that the proposed ground conveyor system may instantly result in an annual savings of Rs 1,21,456.00 in a recurring way as calculated above in addition to the savings that could be obtained under the head of loco-power, rolling stock use, expenses for disposing of the ground stocks and the cost of additional detention of Railway wagons.

Again, the performance of the KC tipplers is also not up to standard; they are rated for an hourly output of 20 wagons; whereas the actual is not so encouraging (Annex-17, 17A). The same set of deficiency, as stated earlier, is also found prevailing there. The standard of supervising "the man on work" in all the above cases is surely far below the minimum expectation. It is often found that

2. StaleyJ.C - "There'll be some changes made", Supervisory Management, Feb.'58.
when tippleable wagons are already standing over the bays for tippling and the tipplers are quite alright to start operation, either the operators are found engaged in some of their usual personal businesses or the maintenance people have been detailed in their routine maintenance jobs. Wrong scheduling arising out of insincere managerial attitude must cost some loss of productive hours. Certainly, maintenance jobs can be done after completion of the tippling work. The incoming coal wagons usually don’t come strictly as per any schedule; their arrivals are normally erratic and it is most desirable to fix up other relevant programmes after carefully considering the chances of unscheduled leece arrivals. Any lacking in this sort of foresight on the part of the concerned personnel may be easily designed as the absence of dynamic management out-look and any organisation can hardly prosper with this sort of harmful practice.

Iron Ore

Iron ore for the plant is procured from Bholani in Grissa and Barajamda sector in Bihar. The annual needs of ore are 21.3 lakh tonnes of BF grade and 1.5 lakh tonnes of SMS grade to meet 1 M.T. production schedules. The ore is usually brought in BOBX wagons (bottom dischargeable) with a carrying capacity fo 60 tonnes per unit and in BOX wagons with a capacity of 55 tonnes per wagon and very rarely in 4-wheelers. The receipts of ore in different types of wagons during 1970 to 1975 may be detailed below:

The ore usually comes in rakes of a particular type of wagons and as a representative sample, two months' figures, namely for March and October of 1969, 1973 and 1975, have been chosen and the figures are as follows:

**Iron Ore Rakes:**

<table>
<thead>
<tr>
<th>Period</th>
<th>ROBX</th>
<th>BOX</th>
<th>4-Wheelers</th>
</tr>
</thead>
<tbody>
<tr>
<td>March '69</td>
<td>79%</td>
<td>83%</td>
<td>x</td>
</tr>
<tr>
<td>Oct. '69</td>
<td>89%</td>
<td>90%</td>
<td>x</td>
</tr>
<tr>
<td>March '73</td>
<td>90%</td>
<td>90%</td>
<td>x</td>
</tr>
<tr>
<td>Oct. '73</td>
<td>90%</td>
<td>90%</td>
<td>x</td>
</tr>
<tr>
<td>March '75</td>
<td>95%</td>
<td>97%</td>
<td>x</td>
</tr>
<tr>
<td>Oct. '75</td>
<td>97%</td>
<td>99%</td>
<td>x</td>
</tr>
</tbody>
</table>

The receipts of ore are also not satisfactory as compared with the schedules, a comparative statement is detailed below for greater convenience of the study.

1. Ibid.
2. The months are chosen because of observed stable movements.
Receipts of Iron Ore

<table>
<thead>
<tr>
<th>Particulars</th>
<th>January '75</th>
<th>February '75</th>
<th>March '75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bholani</td>
<td>135000</td>
<td>65849</td>
<td>135000 - 100725, 135000 - 112500.</td>
</tr>
<tr>
<td>M.U.T.C.</td>
<td>10000</td>
<td>8140</td>
<td>10000 - 6510, 10000 - 5313.</td>
</tr>
<tr>
<td>Washed Fines (For Sister Plant)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noamandi</td>
<td>10000</td>
<td>8360</td>
<td>10000 - 7975, 10000 - 8318.</td>
</tr>
<tr>
<td>Bholani</td>
<td>35000</td>
<td>12100</td>
<td>35000 - 4125, 35000 - 5102.</td>
</tr>
</tbody>
</table>

Again the arrivals are also bunched varying from 30 to 150 BOX and 18 to 30 BOBX wagons in a day. The rakes are as usual drawn from the exchange yard with the help of captive locomotives through the feeder main line and are dressed over the pre-tippler lines for execution in the tipplers. Two BOX tipplers are provided for this purpose there, each of which is provided with inhaul beetles, the reach of each is only 12 wagons at a length and that is not convenient to handle a full rake of BOX wagons consisting of around 40 units and as such in all the cases the use of loco-power is unavoidable to place the wagons according to the reach of the beetles. Should the beetles be reasonably extended, a fair amount of loco-service needed for this purpose, but not recorded there in any form, may be easily saved; the detention of such wagons, caused due to the untimely avail- ing of the inevitable means, i.e, the loco-power, will go down to a considerable degree and above all, the capacity of the tipplers may be better utilised. Some economy at any stage in the production process may have its good

effects felt up to the finished products' stages of any plant. 

But, the beetles in ore tippler, as compared with coal tipplers', are far more effective and are rarely found out of order. This is surely an encouraging instance of following maintenance schedules.

The effective out-turn of two tipplers in ore site is only around 120 BOX wagons in a day, as one of them is mostly kept reserved for specific feeding to Steel Melting Shop. The unreserved tippler provides an out-turn of only around 80 wagons in a day, which is far below the schedule (10 wagons in an hour, i.e., 140 wagons in 14 hrs + 10 hrs reserved for normal maintenance and change of shifts, etc).

Therefore, it is quite obvious here that the tippling capacity for nearly 6000 tonnes of lump and fines in a day is hardly available there. Practically, the situation is further aggravated as tippling of daily 20 BOXes of lime ste is also done with those two tipplers. Even, the existing capacity is just about matched with the daily average input of BOXes to meet 1 M.T. annual production plan, provided one BOX rake of around 35 wagons is made available daily by the Railways, which is practically not done in most of the cases. Therefore, the detention of BOX wagons inevitably goes up as and when a daily average supply of 3 heavy rakes is made available from any source. Hence, the imperative necessity of increasing the out-turn of the present capacity by strengthening the supervision system both in the cases of operation and maintenance schedules of the

2. Source: Tippling Section of Ore Site, Durgapur Steel Plant.
3. Ibid.
4. Ibid.
tipplers need not be overemphasized. In so many cases, the workable tipplers are found kept idle, inspite of the fact that wagons are already over the bays awaiting execution. This sort of evil practice not only increases the detenti of demmurageable wagons, but, in many cases the production schedules of the concerned units are caused to suffer for want of requisite supplies; although these are not minutely recorded.

**Lime Stone.**

The lime stone needs of the plant are met with the supplies from Birmitrapur in Orissa and Bhabanathpur in Bihar! However, the same for Steel Melting Shop feeding comes from Maihar, Satna, Jukhi and Beohani in M.P. To meet an annual production schedule of 1 M.T. steel ingot, 5.5 lakh tonnes of BF grade and .62 lakh tonnes of SSM grade lime stone are annually required. The same is usually loaded in BOX and KO wagons and very rarely in other wagons; a detailed break-up of which is given below

**Receipt of Lime Stone**

<table>
<thead>
<tr>
<th>Period</th>
<th>BOX</th>
<th>KO</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-71.</td>
<td>5690</td>
<td>3819</td>
<td>325</td>
</tr>
<tr>
<td>71-72.</td>
<td>7609</td>
<td>1484</td>
<td>15</td>
</tr>
<tr>
<td>72-73.</td>
<td>8270</td>
<td>431</td>
<td>305</td>
</tr>
<tr>
<td>73-74.</td>
<td>8105</td>
<td>1052</td>
<td>202</td>
</tr>
<tr>
<td>74-75.</td>
<td>8392</td>
<td>956</td>
<td>108</td>
</tr>
</tbody>
</table>

There appears as gradual reduction of EO type lime stone wagons. The receipt of rakes has also gone down lately.

The intake of rakes in two sample months, viz, March and October in 1969, 1973 and 1975, has been scrutinised below for effective convenience of this study.

<table>
<thead>
<tr>
<th>Period</th>
<th>BOX rakes</th>
<th>KO rakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>March '69</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>October '69</td>
<td>60%</td>
<td>93%</td>
</tr>
<tr>
<td>March '73</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>October '73</td>
<td>40%</td>
<td>75%</td>
</tr>
<tr>
<td>March '75</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>October '75</td>
<td>65%</td>
<td>65%</td>
</tr>
</tbody>
</table>

The daily needs of lime stone are around 1500 tonnes of low grade and 400 tonnes of high grade variety; but the actual receipts of the same are usually much short of the schedules.

Recipients of Lime Stone.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>JANUARY '75</th>
<th>FEBRUARY '75</th>
<th>MARCH '75</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Tonnes)</td>
<td>(T)</td>
<td>(T)</td>
</tr>
<tr>
<td>Schedule</td>
<td>Receipt</td>
<td>Sale</td>
<td>Receipt</td>
</tr>
<tr>
<td>Birmitrapur.</td>
<td>45000</td>
<td>9240</td>
<td>45000</td>
</tr>
<tr>
<td>Bhabanathpur.</td>
<td>30000</td>
<td>4370</td>
<td>30000</td>
</tr>
<tr>
<td>NIahir/Satna.</td>
<td>4000</td>
<td>3025</td>
<td>4000</td>
</tr>
<tr>
<td>Jukshi.</td>
<td>4000</td>
<td>1980</td>
<td>4000</td>
</tr>
<tr>
<td>Beohani.</td>
<td>2000</td>
<td>510</td>
<td>2000</td>
</tr>
</tbody>
</table>

2. Source : Ibid.
No bed capacity is provided now to store lime stone and as such it is subject to either unloading on the high-lime bins of Blast Furnaces for their straight way consumption (and that is possible in those cases when the material comes in KO wagons) or manual unloading on the grounds for future consumption which is also subject to expensive double handling. However, BOX loads, in some cases, are manually unloaded on the bins; but, in the case of steel grade material, which cannot be used for direct consumption, double manual handling is unavoidable. In fact, major amount of the material comes in BOX wagons and thus subject to double manual handling process.

The BOX rakes thus suffer heavy detention for want of a direct tipping system to any storing bed. The need for a separate bed is all along felt therefor this purpose so that the material may be straight way stored there instead of being the subject of double manual handling. In case it is not possible to earmark one full bed exclusively for this purpose, at least 50% of the ore/fine bed may be reserved for this purpose conveniently at the western end so that reclamation may be conveniently made. However, as a long term measure, the question of erecting anew bed for this purpose may be given serious consideration and in the context of its long ranging financial implications, the investment will not at all be unwise.

Here also the manual unloading jobs, as a matter of usual practice, are now done with contractors' labours and they, as a matter of convention, are not allowed to work after dusk and thus the detention of such wagons going up to a considerable degree. The case may be dealt in the same way as detailed earlier in the case of coal handling.

Other Trains.

Apart from the above mentioned materials, the plant is to receive so many other loaded material trains, viz, Dolomite chips, Boxite ore, Ferro-manganese, Ferro-silicon, Sulphur, Flourspar, etc, and also wagons meant for Alloy Steels Plant. Their specific dimension for a period is given below for better understanding of the problems.

### Misc. Materials Trains

<table>
<thead>
<tr>
<th>Period</th>
<th>Dolo-Chips</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BOX</td>
<td>4-Wheelers</td>
</tr>
<tr>
<td>1970-71</td>
<td>598</td>
<td>2236</td>
</tr>
<tr>
<td>71-72</td>
<td>385</td>
<td>1329</td>
</tr>
<tr>
<td>72-73</td>
<td>543</td>
<td>4589</td>
</tr>
<tr>
<td>73-74</td>
<td>629</td>
<td>4617</td>
</tr>
<tr>
<td>74-74</td>
<td>795</td>
<td>3397</td>
</tr>
</tbody>
</table>

The receipts of dolo-chips and other materials against the programme for 3 months are detailed below to get a clear view of the whole situation, this matter.

### Receipts of Materials

<table>
<thead>
<tr>
<th>Commodity</th>
<th>0 JANUARY'75</th>
<th>0 FEBRUARY'75</th>
<th>0 MARCH'75</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Schedule (T)</td>
<td>Receipt (T)</td>
<td>Receipt (T)</td>
</tr>
<tr>
<td>Dolomites</td>
<td>13000</td>
<td>3765</td>
<td>13000-2960</td>
</tr>
<tr>
<td>Boxite Ore.</td>
<td>700</td>
<td>530</td>
<td>700-620</td>
</tr>
<tr>
<td>Ferro-manganise</td>
<td>720</td>
<td>230</td>
<td>1065-540</td>
</tr>
<tr>
<td>Ferro-Silicon</td>
<td>300</td>
<td>165</td>
<td>300-176</td>
</tr>
<tr>
<td>Sulphur</td>
<td>2000</td>
<td>1112</td>
<td>2000-1172</td>
</tr>
</tbody>
</table>

The plant should insist on the supply of coke-chips in BOX or open 4-wheeler wagons so that they may be either tippled directly for consumption or easily unloaded manually on the grounds round the clock as insisted earlier in this context; a fair amount of unnecessary detention of such materials trains may be considerably avoided in this way.

**Miscellaneous Wagons.**

Most of these wagons are found to be covered type and they usually carry stores materials and refractory goods. These wagons are always manually unloaded at the respective bays and mostly found unusually detained for long hours (Annex - 20). In support of this sort of regular detention of those wagons, it is argued that the wagons are not either placed properly at the respective sidings or are often placed at odd hours when this sort of unloading jobs are not normally done at present. The first trouble may be easily avoided provided the stationing of wagons is supervised at the very instance of their drawing inside the bays and in that respect, responsibility is to be categorically fixed on the respective bays and the system of informing the drawal of the wagons by Traffic Department is to be introduced so that effective measures may be taken up by the respective departments. But, in the cases of second sort of troubles, introduction of round-the-clock unloading system is the only viable remedy. Again, to locate the actual responsibility in respect of these deficiencies, a placement-cum-drawal memo system may be introduced and the unloading jobs, as a matter of practice, are to be insisted within the conventional free-time.
Again, for want of any bed storing system, most of the steel grade materials are now subject to expensive double manual handling processes which always result in the utilisation of loco-power, use of captive wagons, detention for railway stocks and increased handling expenses, etc. One of the ore tipplers is now specifically reserved for timewise feeding to Steel Melting Shop and as such a very little amount of its service is now available for other uses. A comprehensive plan is drawn up to eliminate the recurring losses caused out of this practice. A part of the existing beds, now being used exclusively for lump and fines, may, for better practical conveniences, be earmarked for steel grade materials. With the same object in view, it may be proposed that suitable parts of all the existing beds at either side may be categorically reserved for major steel grade materials so that these may be conveniently reclaimed; as long as the erection of new beds is not taken up. But as a long term measure, the erection two new beds, provision of which is already found in the southern end of the existing beds, may be seriously considered after taking into account its pros and cons. The cost of the erection, as expressed by a section of plant experts, will be surely far less as compared with the recurring expenses now being incurred there for years together and will be incurred in years to come. The life of a storing bed, once it is erected, will be sufficiently long to make the initial cost of its erection insignificant in comparison with the present value of all sorts of recurring expenses now incurred for these long years.

In addition to the above erection, the current conveyor system will have to be suitably extended right up to the SMS line to facilitate easy lifting from the proposed reservoirs, provided the existing beds are used for this specific purpose. If the reclaiming jobs are to be executed from the western end of the beds, a new reclaimer is to be placed there provision of which is already found at that site.

**Energy Oil.**

The fuels and lubricants for the plant are, at present, received in tank wagons. The position in respect of their schedules and actual receipts per day is detailed below in order to get a clear idea.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Daily schedules (No. of Tanks)</th>
<th>Daily average receipts (Tanks)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan.'75</td>
<td>Feb.'75</td>
</tr>
<tr>
<td>Energy Oil</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Coal Tar / P.C.Mixture</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Furnace oil tanks are usually received in rakes formed with 40 to 56 tanks and coal tar/P.C. Mixture in rakes of 18 to 35 tanks at a time. Although the daily needs of the commodities do not merit the receipt of a full rake at a time, the same is usually done in the greater interest of transportation. The furnace oil storage capacity of the plant is 5,000KL and the siding can hold 60 tanks at a time. The capacity in the case of CT/PC Mixture storage system is 900KL and the siding capacity is limited to 15 tanks.

The furnace oil is unloaded through a gully system, which has adequate provision to connect a full rake at a time; but, it cannot be done now basically due to nonuniformity of the tanks. The tapping hoses, in fact, are of such length which stand in the way of connecting all the old & newly designed tanks of a mixed rake. Complete tapping of a tank is hardly an affair of 7 to 8 hours, although the job under the present circumstances is subject to prolonged processing. The unloading time also depends upon the hot-air pressure which is essential to liquify the semi-solid tanked materials. Anyway, the current trends of detention is really alarming (Annex - 20). Reasonable extension of the present hose tapping system may help largely to minimise the growing trend of wagon detention. The proposed investment, in fact, is not definitely expensive as compared with the heavy amount of recurring demurrage bill owing to the excessive detention of the tank wagons. This will also cut down the need for loco power which is essential for shunting the tanks.

Besides, there are other constraints preventing timely unloading of those tanks. One of them is that the workers doing the job of connecting the hoses work only from 8 to 16 hours in the day and the tanks received beyond this time become the subject of next days operation. It has been experienced, that furnace oil tanks are normally detained around 40 hrs. inside the works due to this reason. The problem may be reasonably minimised provided the workers are engaged round the clock as in the plant so that tanks may be taken up for unloading operation whenever they are received.

The CT/POK rakes can now be unloaded only at a rate of 4 to 5 tanks at a time owing to the inadequacy of the gully system and this leads to the detention of the rakes heavily beyond normal hours. In order to ease the situation, it is proposed that the present gully length is to be extended up to 10 tanks' capacity at a time towards the eastern end of the siding where provision is already left. However, as a matter of greater convenience, a new gully, parallel to the existing one may be installed on the new line of the siding to facilitate smooth return of a rake of CT/POK tanks within the normal free time. As has been noted earlier, even heavy investments in such cases are fruitful since they aim at minimising recurring expenses on various heads for all time to come.

The affairs of a heavy industry like a steel plant are never of a short-run duration, rather they are of a very long-term nature. Again, its productive investments amount to heavy figures and usually have a chain of greater consequences. So, the cases of productive capital investments must be wisely considered so that the organisation may not suffer in the long-run due to such decisions. Some thing may not be apparently visible, or directly effective, but, its consequences may be greater and far ranging; and it is quite reasonably expected that the standard of efficiency of operative management in a giant industry like steel plant will be able to foresee the possible consequences of important decisions. If, in any case, the performances of the operative set-up of an industry are found not upto that standard, it may be safely said that the management system of the unit is most unsuitable to run such a giant industry.

and in some cases mentioned earlier, the symptoms of that type of ineffectiveness are quite apparent. It may be reasonably desired that the system there will be suitably tuned; otherwise in days to come we will not derive any expected out-turn from the organisation as a whole.

All the possible troubles in the way of incoming loads have been analysed and remedial measures have been suggested. Although these measures are expected to yield good results, it should be noted that Traffic Department alone cannot be made efficient if the other departments around it do not co-operate in the desired way. To ensure such co-operation should be the responsibility of higher management.

A co-ordinating cell, under the central plant administration, is already placed there to perform this sort of function, but its practical impact is surely far below expectations, otherwise such a gloomy state of affairs throughout the plant should not have been prevailed so long. It is desirable that the cell must get all the relevant information in respect of the incoming loads with exact time of arrivals in the exchange yard. It should get prior informations with regard to forecasts of arrivals, schedules of feeds to the furnaces and ovens, ground and bed stock positions of the materials, programme of manual ground unloading, their operation under contractual functioning, tippling affairs and all other matters that may arise in these ways of operation so that timely action may be taken to prevent inconveniences in the related sectors of operation. Due importance must be given to the findings and ways and means suggested by the cell and in that regard

appropriate authority must be delegated.

The private number system, as discussed earlier, may be usefully introduced to locate any responsibility particularly. Again, an effective telecommunication system is long being desired there to co-ordinate the affairs in time. The cell shifts should be manned properly; specially the night shifts should best be placed under widely experienced senior executives, possibly in the rank of departmental heads by rotation to facilitate the spot decision making and when required. Such a system was introduced sometime in 1970 during Pakistani aggression and was found very effective. The system however had been discontinued for unknown reasons. But in view of its proven effectiveness, it should be reintroduced again in the greater interest of the plant economy.

**Internal Movements.**

The function of the inward traffic movements come to an end when the loaded wagons reach the respective tipplers or the manual fround unloading points. These have been discussed in the last part of the study. The next courses of the discussion are likely to include the rebooking of the materials to the respective consuming units and this known as internal traffic movements. The plant for the convenience of its effective operations, maintains various types of conventional and nonconventional steel plant type special wagons to facilitate the jobs in time and according to needs (Annex -15). The special type wagons, in fact, are exclusively reserved for particular jobs done under specific departments and their effective movements are also controlled by the respective units. Traffic Department reserves very
little control over their affairs at present excepting that of pulling them according to the decisions of the usage from time to time. Hence, their discussion in details do not practically come under the purview of this study, excepting their timewise drawing with locomotives.

The movements of the captive conventional wagons mainly come under the purview of this study. The internal transhipment of materials is likely to be done with the help of captive wagons (Annex - 15); but, in many cases, jobs of this nature are found carried out with the help of released Railway wagons due to nonavailability of domestic supplies at the right moment. This is not at all a fair practice when domestic reserves are reported to be quite sufficient to meet this purpose. They should be made available in time under a comprehensive maintenance programme, a tentative plan of which has already been given. But, the troubles may not end there. It has already been mentioned that Traffic Department is exclusively a service system and its major parts of the responsibilities are concerned with meeting others' demands and it is the utter responsibility of the user sections to come forward to co-operate with this unit in this matter; otherwise the very essence of corporate achievement will be lost.

Ineffective and unscientific planning for the utilisations of the captive stocks is however, one of the main problems. The wagons are quite often found detained beyond any justifiable time; although there is no system to note their actual detention in a particular course of operation. No distinct effort is also found anywhere to release the wagons timely from a particular course of

operation; as such, the wagons are found detained abnormally to give enough scope for the frequent utilisation of Railway stock. In fact, the using sections are largely reluctant to finish their part of the job in time. A system of imposition of demurrage, even of a notional nature, at Railway rate for detention of wagons after stated free-time, may be introduced in order to insist on the early release of the wagons by the users.

It should be mentioned here that such wagons are used both by sister units and contractors' organisation. But, the demurrage payable is shown only in the head of accounts of Traffic Department without indicating the area of responsibility and it appears as if the Traffic Department alone is responsible for this loss. Placement-cum-release memo system under the joint signature of Traffic Department and the consuming sections is to be introduced to fix the responsibility in the case of detention of wagons. When contractors' labours do the unloading and reloading jobs, they work only during the day hours (i.e., between 8 hrs. and 16 hrs.) and, in fact, the daily quantum of work is found not possible to be fully completed within this specific period in a day. A part of the work is usually left incomplete for the next day and thus the half done jobs aggravate the detention of the carriages to a considerable degree. As suggested earlier, continuation of the contractual jobs round the clock along with the plant operations is the only viable alternative in this direction. Again, a copy of the memo, mentioned earlier in this context, may be handed over to the Vigilance People to avoid all sorts of malpractices, which are apprehended.
by concerned executives. The availability of captive wagons for internal uses may thus be increased to a considerable degree which will save a large amount of demurrage.

Outward Movement.

The inward and internal traffic movements have been discussed in detail in the earlier two sections of this study. It is expected that the suggested lines of action will pave the way for a far better performance. It is also firmly believed that the plant authorities will surely come forward to take all other relevant measures to ensure similar types of effectiveness from other sectors of operations, the discussions of which are outside the purview of this study, so that an all round development may be attained throughout the plant.

Inflow of funds for the economic stability of the entire organisation is made possible by the sale of its products. Hence, the timely despatch of the products is of utmost importance. Although it is a government undertaking and as a matter of practice, assistance is usually accorded as and when required; but, in the interest of self-reliance, there should be a limit to avail of such economic assistance from the government. Self-sufficiency is the right means to set a stable existence and to plan for expansion. Smooth outward product flow in terms of sale is the only effective means in this direction. The sale promises fair returns on investments, the returns ensure reinvestment, ease the flow of fund and eliminate stagnancy all round the operational processes and thus saves

1. Source: Concerned men of the plant.
the way to self-stability as an achievement of the avowed objective of organisational policy.

Again, morale of the employees is a vital factor to maintain the rhythm of production. It keeps the wheels of production moving smoothly and effectively and pays back the expected results. It is expected that the products of the plant have a fair demand in both internal and international markets. But, instead of being sold regularly, if the products get stacked continuously, the fair weather of scheduled productivity is not usually maintained in the unit; whereas, a steady sale of the products of the plant side by side the productive processes, normally stirs up the morale of the employees to a considerable degree.

Durgapur Steel Plant is a public sector industrial organisation. It has surely got to play a very important role in the entire economic structure of the nation. Although traditionally acclaimed as one of the dominating factors in survival and expansion of an organisation, profitability is not surely the sole factor in the case of a government project. Planned distribution of its products all round the country in keeping with the national priorities is surely the high idea behind its establishment and here in the instance of Durgapur Steel Plant, Traffic Department is the organ upon which a major part of the whole affairs is largely dependent (Annex - 18). The very nature of the jobs involves many complications in their routes of smooth operation. The real idea of their discussions is to analyse the current state of affairs under which such a complicated responsibility

1. Ibid.
4. Source: Production, Planning & Control Dept., DSP.
is usually discharged and to sort out the relevant inconve-
niences in its way.

The commercial section of Traffic Department has
been entrusted with the above mentioned responsibilities.
Apparently, the scope of broad based technical involvement
seems to be very remote in this sector of operation; but,
tremendous technicalities are always found in every phase
of its operation. Huge financial implications are usually
involved in any of its transactions; right care and useful
tactics are the only means to gourd the interest of not only
the organisation as a whole, but also the large number of
domestic and foreign customers. The scope of its operations
is in the nature of formidable forecasting and its entire
procedures of operations are nothing more than timewise
co-ordination for which this section is the nerve-centre.
Many a departments are found involved in this chain system
of operation and they are invariably dependant and counter-
dependent upon each other particularly in the context of
these affairs.

The production units of the plant, excepting
those in the cases of running operation, viz, Blast Furnace,
Coke-ovens, etc, are to proceed according to specific
guidances from the Production, Planning & Control Depart-
ment, which, in fact, has been designed to take care of
these responsibilities; this department is directed by
different distribution authorities, responsible to cater
to the demands for the products of the steel plants all over
the country. Strategically, very few of the steel plant pro-
ducts are subject to direct disposal by the local authori-
ties; hence, the consumers are to submit their demands, in

1. Source : Production, Planning & Control Dept., DSP.
most of the cases, to the Central Sales Authorities.

The commercial section of Traffic Department nor-
mally receives monthly forecasts of wagon requirements of
the plant as a whole, being drawn by Production, Planning &
Control Department in accordance with the ensuing sale
orders in hand. However, the daywise requisitions of spe-
cific needs are received from the respective shipping sec-
tions. The piece-meal indents, thus received, are systema-
tically consolidated and placed to the competent Railway
authorities by Traffic Commercial Section. The Railways,
according to their regulations, allot wagons to the steel
plant.

A major part of the above mentioned affairs, is
documentary in nature and needs expert and experienced
personnel for appropriate handling. The job-experience
is of greater importance in case of jobs of this nature
as compared with broad academic attainments. Qualified
Engineers have been tried in vain for this sort of job;
whereas, less qualified personnel with long experience
have been found to be more useful.

Details of the nature of jobs normally done under
this section have already been discussed and it will be
convenient to take up a thorough study of the commodities,
despatched through this section

**Despatchable Commodities.**

4. Steel Ingot.  5. Scrap.

Despatches from the plant mainly depend upon availability in time of right types of wagons in each of the cases. The empty Railway wagons needed for outward loading are normally taken from wagons released inside the works after the incoming materials are unloaded. But, there are some special type of wagons, which usually do not come to the plant in terms of inward traffic. The BFRs, a class of that category and very frequently used mainly to despatch the mill products, are supplied afresh by the Railways on demands from the plant. It is quite often experienced that unfit empty wagons are supplied to the plant creating tremendous inconveniences in loading at the shipping bays (Annex - 28). To remove this trouble, train examination system is to be introduced both at the post-tippler lines from where most of the empty wagons are availed for outward loading and at the exchange yard to look after the fresh supplies.

As far as BFR type wagon is concerned, the daily need is around 40 nos. to match 1 M.T. annual production plan, provided steel ingots are allowed in BOX wagons; otherwise, the figure will go up to 55 nos. per day. But in practice, the flow of BFR supply appears to be very erratic (Annex-28). Again, the supply of frakes, which may be convenient for any particular type of outward despatch, is also found not upto satisfaction (Annex - 29). The mill products are conveniently booked in BFR type flat wagons and any sort of its unscheduled supply dislocates the schedules of standard despatches from the mills.

Again, the reloadable Railway empty wagons, now being taken from within the works, should not be gathered haphazardly from all over the plant unloading sites. The

1. Source: Traffic Commercial Section, DSP.
empty four-wheeler, both open and covered types, released inside the works and needed for rebooking, are to be systematically linked with the schedules of ensuing despatches, keeping in view the distance coverage for cross movements and complicacy of shunting them between the points to facilitate better workability in this direction. The daily needs of covered and open type four-wheeler empty Railway wagons are around 25 and 45 nos. respectively. These are mostly availed from Coke-ovens and Refractory Stores areas, where most of such types wagons are released.

Another problem, usually faced in this context, is that some of the covered empty wagons are not declared fit for carrying perishable goods like naphthalene and ammonium sulphate, etc. It is most preferable not to place such unfit wagons at these particular type of booking points.

Again, where the booking of outward traffic is done under contractual agreement, round the clock working should be allowed to avoid additional detention of those wagons.

**Loading of Pig Iron.**

The loading of pig iron is now subject to repeated adjustment due to initial inaccurate booking. The magnetic overhead crane, in fact, picks up varying number of pig-pieces and dumps them in wagons: naturally, instant accurate booking is not possible to be done. The current practice thus leads to repeated adjustments to get wagons properly loaded with the goods in accordance with sale orders in hand. The installation of automatic weighing meter with the overhead

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2. Source: Traffic Department, Durgapur Steel Plant.
cranes may easily solve the problem.

The empty wagons, meant for pig loading, are now supplied to the bay via a computer loop-line and the loaded wagons are also drawn through the same route to the exchange yard (Annex - 22). But, owing to some technical inconveniences, a full rake of 35 BOXes, at present, cannot be drawn at a time and it is now drawn in 4 lots and marshalled over the line near the inward weigh-bridge for disposing them of to exchange yard. The whole process, now being followed, is always a time consuming one, looking considerable costly loco-hours and blocking line inside the works, not to mention the severe interference with the hot-metal ladle and internal open wagon movements to and from Slag Bank Division (Annex - 22). The provision is already there to move the pig loaded wagons through a direct line; but, that is almost found out of use due to heavy gradient, which is stated to be most unsafe for the movement of such heavy loads for want of adequate signalling provisions in the area.

The installation of that direct pig movement line had certainly required heavy capital investment; but, it is left out of operation simply due to the absence of appropriate signalling system, the provision for which will require insignificant investment as compared with the service available from it. The same has not been thought of simply because of lack of foresight on the part of operational management. Durgapur Steel Plant, the sick child of the industry, is one of the worst victims of short-sighted management policy and it will be most useful, if suitable arrangement is made to tune up its operational management system in a more dynamic approach.

1. Source: Traffic Department, Durgapur Steel Plant.
It is reasonably desired that a signalling system be installed at the crossing of the direct pig line with inward main line just outside the railgate to ensure safe movement of pig wagons; and under the renewed arrangement loaded wagons will move straight from PCM area to exchange yard with inward main line (Annex - 22). Again, the rakes from this area, instead of being drawn piece-meal, should be hauled as a whole with the help of better powered locomotives. The direct despatch of these loads will not interfere with the main line movements and thus reduce the shunting jobs within the plant. However, the direct pig line is desired to be regraded as a long term measure in this direction.

**Booking of Mill products.**

Each of the end product sections of the plant has been provided with a separate shipping section, the specific function of which is to load wagons with particular departmental products in accordance with the guidance given to them by the Production, Planning & Control Department. The mills are also provided with the same sort of facility. But, it is experienced that most of the loadable wagons in the mill bays, specially the BFR type wagons are found abnormally detained (Annex - 20). It is a harmful deal not only from economic point of view, but, it also stands in the way of getting regular supply of fresh wagons from the Railways and as a result, the schedules of despatches from the mills are caused to suffer to a considerable degree. The argument in support of this sort of abnormal detention of the loadable wagons in the mill areas are, in most of the cases, not tenable. Tremendous insincerity is found dominating all over the whole affairs and watchfulness is practically
absent in those cases.

Each of the mill shipping units has been equipped properly to meet the current work loads. It is quite often urged that the loadable wagons are not properly placed in the bays to effect instant loading; and in most of the cases, the responsibility is shifted to Traffic Operation Division which is to place the loadable wagons in the bays. The problem, in any case, may be easily solved, provided the stationing of the wagons at the bays is supervised at the very moment of their placing in their respective yards and that is the instant responsibility of the concerned shipping units. Mere vigilance over the whole affairs around it, may easily resolve the whole burning problem now being experienced for years together.

Booking from Coke-ovens
(Products & Byproducts).

Mixed Coke.

Coal, charged in the ovens, is turned into coke of various sizes and a few types of byproducts. The smaller size coke, normally not usable in either of the plant operations, is as a matter of convenient policy, dispensed of to outside market. Since the daily raising of such coke accumulates to around 10 ordinary four-wheeler wagons from the Blast Furnace area alone, the daywise wagons cannot be detained to form a full rake, which is a convenient unit for despatch operations and these are now despatched piece-meal, provided the allotment of wagons is regularly availed from the Railways; otherwise, the daily arisings are dumped on the grounds for the next chances of loading as and when the
wagons are supplied from them. Thus, there is, in practice, either detention of wagons to form rake for convenient despatch or costlier double manual handling of the materials.

At the level of 1 lakh tonnes of coke production target, the monthly arising of mixed coke normally appears around 15,000 tonnes, consisting of 50% breeze, 20% pearl and the remaining 30% as nut coke. From the statistics below, an idea may be formed of the actual gravity of the problem, as it minutely shows the particulars of the cases, the quantity usually unloaded on the grounds and the despatches through the Railways.

<table>
<thead>
<tr>
<th>Period</th>
<th>Despatched through the Railways</th>
<th>Unloaded on the ground</th>
<th>Total arising (Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan.'75</td>
<td>250 KC + 67 BOX</td>
<td>8685</td>
<td>6270</td>
</tr>
<tr>
<td></td>
<td></td>
<td>93 KC + 83 OS +</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 BOX</td>
<td></td>
</tr>
<tr>
<td>Feb.'75</td>
<td>210 KC + 55 BOX</td>
<td>7225</td>
<td>7645</td>
</tr>
<tr>
<td></td>
<td></td>
<td>78 KC + 65 OS +</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>87 BOX</td>
<td></td>
</tr>
<tr>
<td>Mar.'75</td>
<td>225 KC + 73 BOX</td>
<td>8515</td>
<td>9765</td>
</tr>
<tr>
<td></td>
<td></td>
<td>89 KC + 59 OS +</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>91 BOX</td>
<td></td>
</tr>
</tbody>
</table>

N.B : KC & OS = 20 t. and, BOX = 55 t.

A huge stock of mixed coke is thus accumulated inside the works when the storing space is already very limited there. Early disposal of the material is the only way to go out of this sort of trouble.

1. Source : Production, Planning & Control Dept., DSP.
2. Source : Traffic Commercial Section, DSP.
Many impediments, both natural and artificial, are reported to exist in the courses of despatching the coke wagons on piece-meal basis, resulting to increased transit time of the wagons; it is therefore desirable to insist upon rake-loading in this particular sphere of traffic operation to eliminate the current troubles. The concerned plant authority may easily negotiate with the Railways to avail standing allotment of 2 to 3 directional or single point rakes in a month to facilitate continuous process of despatch of the material, which will appear as a useful instrument for both the concerned government agencies to handle this material.

However, keeping in view the difficult wagon supply position even for high priority traffic and ever increasing stock of the material inside the works, creating stagnancy of running capital and nonavailability of storing space, the disposal of the goods may be insisted upon by road transport to the extent the Railways are unable to give full rake allotment.

Directional Rake Movement.

Each of the plant shipping units sends its indents of wagon needs to the commercial section of Traffic Department; these piece-meal indents are then rearranged in consolidated statements according to category of wagons and authority concerned to grant allotment on the part of Railways. The Railways, on their part, consider "Route-restrictions" and other consequent affairs before offering any allotment. All the above mentioned procedures are naturally time consuming factors. It is, therefore, most desirable that instead of making unnecessary reference to the Railways, specially

in the cases of only checking the route-restrictions within the
Zonal Railway areas, the jobs may be easily insisted upon the
people of Traffic Commercial Section; however, route-restric-
tion memos and other relevant papers are regularly to be made
available to them by the Railways. This type of simplifica-
tion of procedures should be made wherever possible to eco-
mise time. But, in the cases of special allotments, which are
subject to critical Railway Regulations, the present procedure
may be followed as usual. The plan to form directional rakes
may thus be executed, provided other relevant consequences
are sorted out in time. The Railways, in their turn, will
also be easily able to waive the route-restrictions in many
cases when directional rakes will be offered to them.

In order to clear the scope of loading directional
rakes from the plant, a comprehensive report of the number of
block rakes, despatched during a brief period of 1975, is
given below.

**Despatch of Block Rakes.**

<table>
<thead>
<tr>
<th>Period</th>
<th>Fig</th>
<th>Steel</th>
<th>Billet &amp; Bloom</th>
<th>Mixed Coke</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan.'75</td>
<td>15 BOX</td>
<td>8 BOX</td>
<td>2 BOX</td>
<td>4 BOX</td>
<td>29 BOX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 KC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 KC.</td>
</tr>
<tr>
<td>Feb.'75</td>
<td>13 BOX</td>
<td>7 BOX</td>
<td>2 BFR</td>
<td>5 BOX</td>
<td>25 BOX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 KC</td>
<td>3 KC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 BFR.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 KC.</td>
</tr>
<tr>
<td>Mar.'75</td>
<td>6 BOX</td>
<td>x</td>
<td>7 BFR</td>
<td>6 BOX</td>
<td>14 BOX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 KC</td>
<td>1 KC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 BFR.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 KC.</td>
</tr>
<tr>
<td>April'75</td>
<td>6 BOX</td>
<td>x</td>
<td>10 BFR</td>
<td>5 BOX</td>
<td>13 BOX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 BOX</td>
<td>4 KC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 BFR.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 KC.</td>
</tr>
<tr>
<td>May'75</td>
<td>10 BOX</td>
<td>x</td>
<td>11 BFR</td>
<td>6 BOX</td>
<td>16 BOX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 KC</td>
<td>3 KC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 BFR.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 KC.</td>
</tr>
</tbody>
</table>

2. Source : Traffic Commercial Section, DSP.
It is quite clear from the above observation that fabulous scope of rake loading in most of the cases of detachable items is left there. It is therefore most reasonable to insist upon measures for rake loading in the greater interest of quick disposal of the products from the plant.

As regards the limitations imposed by different Steel Authorities in respect of priority of distributions for goods and products of the steel plants all over the country, it may be quite reasonably expected that there should be no objection provided the schedules are met within a reasonable period, viz, a month or so.\(^1\) Certain day-to-day violations in a limited period should also be permitted by the concerned authorities in the interest of greater economic convenience; provided all the commitments are regularly fulfilled in the same stipulated period and this particular aspect may be easily sorted out with the concerned authorities by the respective plant management.

It may now be established from the above mentioned experiences that modernisation or rectification of many of the prevailing practices are clearly felt necessary in some of the cases; but, it is really astonishing to note that nothing practicable has ever been done there; inspite of the facts that the problems are not found so critical in their nature that can not be sorted out by the management of an ultra-modern industrial organisation like Durgapur Steel Plant. It is as if taken to be granted by the concerned authorities that the prevailing practices are to be followed for ever and these are not changeable in any way. In fact, inefficient bureaucrats develop a habit of this type whenever inefficiency is not penalised.\(^2\) Half-hearted efforts in this direction were

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1. Source : Central Sales Orgn., Hindustan Steel Ltd. Calcutta.
made at times without any convincing result. Is it not the clear instance of insincerity and lacking resourcefulness? In fact this is not an isolated affair particular to the Traffic Department; it is almost a general phenomenon observed in most of the cases in the organisation. It has already been found in many cases that the actual troubles are found in respect of the dealing with "men in action", i.e., operational management and very rarely with the technological factors. It is therefore, the urgent necessity to tune up the action in the right direction, so that the basic factors may be rightly resolved in time; otherwise all the other remedial measures, whatsoever they might be, will go in vain and the organisation will stay in dark as usual.

Making over the empty Railway wagons.

Now, both the empty and loaded Railway wagons are made over to the Railways in a mixed condition; and as a result, many fold shunting is usually required in the exchange yard to sort out the wagons in the right rakes and a good number of departure lines are found blocked for long hours, preventing further movements of outgoing loads from the works and the loaded wagons are thus detained abnormally inside the plant. Although this type of detention is not directly linked to financial loss involving payment of demurrage, but sale orders in hand are held up and thus the running capital is blocked for want of quick disposal of the products. The current practice is not at all convincing and immediate measures are needed in the greater interest of the plant.

After meeting the reloading programme of the entire plant, the Rly. wagons should be made over in complete makes
to the exchange yard. It will minimise the unnecessary occupation of internal yard and will largely help to clear up the departure lines in the exchange yard. A comprehensive programme, as detailed below, may be followed to meet the needs of the situation.

**The programme.**

1. The released empty wagons must not be chained with the outward loaded wagons from the plant.
2. BOX, BOBX, and KO type wagons, as consequently available, will have to be made over as pure empty rakes.
3. If sufficient number of single type wagons are not made available at a particular time to form a complete block rake, any type of wagon will have to be linked in a rake but empty and loaded wagons should not be mixed up.
4. The released empty wagons from the coal tipplers will have to be sent back, as far as possible, in complete block rakes to avail the facilities of closed circle movement of the coal wagons.

Again, a fair amount of prevailing trends of detention of the incoming Railway wagons inside the works may be easily avoided, provided all the released but unwanted four-wheeler and other types of wagons are collected from the post-tippler lines and sent back to the exchange yard as a full train. The post-tippler lines are ideally suited for this particular purpose since the loaded wagons are sorted out there according to category for the convenience of being tippled by a particular type of tippler.
A clear instance of carelessness is also distinctly visible in the occasion of programming the loco-power availability to send back the outgoing released empty Railway wagons to the exchange yard in time. In fact, over detention has become the rule for the nonavailability of loco-service, which is simply a matter of careful adjustment in the loco-working schedules, now being operated in these areas of operation. It has already been clearly observed from the loco-power distribution chart, mentioned elsewhere in this course of discussion that there is a clear provision of 4 Locomotives to carry out the jobs to and from the exchange yard. Inspite of the above fact, it is found that the empty outgoing Railway wagons are still left unattended for long hours to cause unnecessary financial strain for the company. These financial implications never come to the limelight as they are not recorded separately in any books of accounts; although these may be noticed at any time. Even persons high up in the organisation never bother their heads about this fact. The wagons may be easily sent back to the exchange yard when the locomotives are moved there to draw incoming loads. This is nothing more than a simple case of routine adjustment of day-to-day loco working schedules of exchange yard operation. It is really surprising to note that such an inefficiency is allowed to continue so long when the incident is well known to every body concerned. A chain of supervision system is already there to take care of this type of usual affairs; but, surely their effective operation is not beyond doubt. The result of this sort of poor supervision is the payment of huge amount of demmurage regularly, affecting the annual financial result of the organisation as a whole.
The labelling of outward wagons, as a matter practice, is now checked only at the exchange yard when the wagons already reach the final stage of handing over to the Railways. The unlabelled wagons are then sorted out there on the reception lines to return them again to the works for further rectification. The prevailing practice is never a desired one, which constitutes resultant manifold shunting, unnecessary misuse of costly loco-hours and over and above too heavy detention of loaded outgoing Railway wagons. Ways and means should be found out to eliminate this revenue consuming practice. But, it is shameful to note that minimum amount of sincerity needed to solve such a minor nature of problem is also found totally absent in this instance. Outgoing loaded wagons are now booked at the respective shipping bays and then labelled by the Railway staff, working inside the works, according to the relevant documents supplied to them by the concerned plant people, before drawing them to the exchange yard for final disposal to the specific destinations, mentioned in the despatch advices, prepared by the traffic commercial people. To take up a convenient remedial measure to overcome the current difficulties, the unlabelled wagons should not be sent back to the plant for further correction. A message may be sent over phone to the concerned people to supply information about such wagons and on receipt of the relevant information, concerned people, working at the exchange yard, may easily issue a memo to the Railway staff working there in this connection, so that instant action can be taken up there. Besides suitable care must be taken to check up the labelling of outgoing loaded
wagons at the shipping bays themselves, before sending them out of the works, so that the number of such cases may be minimised.

Again, a considerable amount of time is found lost due to nonuniform change of shifts for the plant and the Railway people working in these spheres. The plant authorities will have to insist upon the Railways to bring uniformity in this matter so that working hours are not lost on a recurring basis.

Working of the exchange yard and also the Railways' affairs concerned to the plant, in most of the cases, appears very critical; in some cases, the people working there are to connect higher authorities to solve the problems. The current practice is not at all convenient to match such a constant flow of operation. The service of a responsible Railway Officer is urgently needed at the exchange yard to tackle the day-to-day problems on the spot. Such a service is already in operation in the South Eastern Railway areas; it should not be a problem, provided the matter is taken up with appropriate levels of the management of the Railways by the plant authorities.

Materials like ammonium sulphate and naphthalene are now loaded in standard bags and the number of bags, loaded in a wagon, is also recorded in the relevant documents. Again, the steps of loading in the wagons are although supervised and certified by the concerned Railway staff, posted inside the works. Inspite of the above mentioned measures, it is never understood why such wagons are held for long hours for further weighment. This sort of economic lapse can be easily avoided by noting the weights calculated on the basis of no. of bags in the relevant documents.
Again, the executives of the commercial traffic section are now stationed on duty only from 7.30 to 16 hrs in a day and beyond these hours, problems are normally settled over telephone. But, majority of the executives are not provided with residential telephone connections and as such, in number of cases, problems are left unattended till the next available opportunity. Operation of Traffic Commercial Department is, in fact, very critical and always needs a very clear observation to protect the interest of both the company and the customers all over the country and abroad. Naturally, the importance of supervision from the concerned executives and senior staff personnel needs no mentioning. So, to arrive at a solution in this context, either the executives should be posted round the clock by rotation or internal telephone connection is to be provided at the residences of the executives and important staff personnel of this section. It has been very interestingly noted in the context of residential telephone provision in DSP, that rank in hierarchy is the guiding factor in this context and in so many cases, it can be easily proved that residential telephone connection of some of the executives of a few department never come to be of any use for the organisation, because the nature of jobs handled by them is such that their opinions beyond office hours are never sought. Should it not be the work-load and work-importance to be the criteria to utilise any official machinery?

Besides, in some of the cases, outward loaded Railway wagons like inward wagons are found drawn with the help of single engine locomotive, creating manifold movements. Many ill consequences, viz, additional detention of wagons to cause demurrage payment, blocking of internal yards and exchange yard departure lines and delay in disposing of the sale orders
in hands, etc, are found to take place in this instance. The cases may be easily avoided, provided such loads are hauled with double-engine locomotives. Again, in the instance of proposed directional rake movements, the new venture will be most convenient to sort out the cases easily and economically.

Movement of loads for
Alloy Steels Plant (ASP).

It has already been pointed out elsewhere that joint traffic operation system has been introduced for the greater economic interest of both the organisations. A common railway exchange yard is now being utilised for both the plants and thus a fair amount of capital investment has been wisely avoided. Although, detailed discussion of ASP traffic operation does not come under the purview of this study, we may concentrate on some common problems in this area. All the Railway goods trains meant for ASP are made to pass through the works' premises of DSP right across the centre of the plant and in the courses of both way operation, the hauling of wagons is done by DSP locomotives. Although the movement of ASP wagons is limited as compared with DSP's work loads, a comprehensive break-up of the operations is given below:

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Tonnage</th>
<th>No. of wagons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrap</td>
<td>2820</td>
<td>20 BOX + 90 FW.</td>
</tr>
<tr>
<td>Limestone</td>
<td>1300</td>
<td>20 BOX + 15 FW.</td>
</tr>
<tr>
<td>Ferro alloys</td>
<td>575</td>
<td>27 FW.</td>
</tr>
<tr>
<td>Refractories</td>
<td>440</td>
<td>22 FW.</td>
</tr>
<tr>
<td>Furnace Oil</td>
<td>1500 KL</td>
<td>75 Tanks.</td>
</tr>
<tr>
<td>Cement</td>
<td>800</td>
<td>40 CD.</td>
</tr>
<tr>
<td>Others</td>
<td>400</td>
<td>20 CD/KC.</td>
</tr>
</tbody>
</table>

1. Source: Traffic Dept., DSP & ASP.
In other words, total weight to be moved as inward load, appears to be around 5,835 tonnes per month. It leads to 390 wagons in terms of four-wheeler per month and an average of 13 wagons per day. This however excludes the scrap movement from DSP in its own rolling-stock, detail of which has already been taken up in the course of internal traffic movement.

In the context of huge provisions made in DSP, the daily average number of incoming and outgoing ASP wagons never constitutes any serious problem in the course of traffic operation in DSP; the work load is easily carried out along with DSP. But, the prevailing frequency of calls for service from ASP is reported to have created manifold inconveniences in the course of handling DSP's own affairs. The problems may be easily sorted out by asking ASP to rearrange their own procedures of traffic operation. They will have to station their outward loads to a particular stabilising point from where DSP locomotives will draw them at the time of making over the incoming loads of ASP once or twice a day, as found necessary in this context. To make out a smooth flow of operation, a better telecommunication system is most urgently needed there so that information to and from the organisations may be easily relayed.

Again, the captive wagons from DSP, now being utilised to despatch scrap to ASP, are now subject to heavy detention at their works creating tremendous inconveniences to DSP for none of its own faults (Annex - 27). Although, demmurage is claimed for this sort of delays; but, the rates are abnormally low as compared with the Railways' rates. To

1. Ibid.
2. Ibid.
protect the economic interest of DSP, Railway rates will have
be introduced so that DSP will not bear any loss in such
cases when it will use Railway wagons for domestic purposes.
Moreover, it is understood that in the cases of
non-availability of captive units, due to heavy detention at
ASP's works, DSP is to maintain the supply of scrap to ASP
in Railway wagons to continue their production schedules.
These Railway wagons are charged at the same rate like the
internal units which is, in fact, far below the Railway rate
and thus DSP is to face a fair amount of financial loss. ASP,
the organisation responsible for the detention of DSP's inter-
nal wagons, does not suffer anything and the entire loss is
borne by DSP. It is really disgusting to mention here that
inspite of the above facts, the losing organisation is neither
taking a clear note of it in its books of accounts, nor does
it make any effort to make good this loss in any way. It is
really interesting to note that a very responsible section
of officials of these organisations happen to support this
sort of operation on the argument that both the organisations
belong to the same parent body which is a national organisa-
tion and so it is no loss in either way to the national eco-
nomy. It sounds ludicrous. Loss of time is a loss for ever-
it can never be made good. If production suffers due to
detention of wagons at any course that is a genuine loss.
Again, the Railways do not give any concession to the DSP
although both of them are national organisations. Further,
the financial losses of these types are not publicly projected
in the final books of accounts of the organisation. One mere
illustration may be taken relating to the sale deal of wheel
sets from the plant. The wheel-sets, produced in the plant,
are now sold at a loss of Rs.3,000 per set to the Indian Railways, the lone consumer of the product, which is also a government organisation. The Railways, however, used to purchase the same type of set at a far greater price from other sources.\(^1\) Apparently, this is no loss in the context of national economy. But, is it not a fact that the accumulated losses of these types have a severe impact on the financial state of affair of the plant which is creating a gloomy picture in the public eye? It is rather surprising to note that the plant had to sustain an annual loss of Rs.7.25 crores in the year 1976-77, in spite of the fact that the annual production was exceeded.\(^2\) How such a picture can appear? It may easily be said that the mode of losses mentioned so far during the entire course of this study have played a major role to project such a discouraging picture. Serious attempts have never been made to protect this organisation from such losses. So to make good the loss, caused out of supplying scrap in Railway wagons from DSP, suitable convention is to be introduced which will be fair to DSP. It is not possible on the part of DSP to take any measure to warm up the activities at ASP, which, in fact, keeps a separate identity and an independent managerial set-up, upon which DSP has no direct control. Negotiation should be initiated with ASP to ensure that for the inefficiencies of ASP, DSP does not stand to lose; and as far as the current practice is not fair enough from the economic point of view of DSP, if it is to continue, it should be done at the cost of ASP's exchequer (Annex-26). Moreover, DSP locomotives are now found in use to haul wagons for ASP. Although a price is charged, it is far

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1. Source: Public Relations Department, DSP.
2. Source: Finance Department, DSP.
below the actual cost (Annex - 25). The rate was determined long back and by this time all relevant cost has gone up to a considerable degree, naturally requiring a revision of the rates to make good the current loss in this context.

Role of the Railways.

All the above discussions have been projected from the view-point of DSP. But, these are never one-sided games in any sense that can be tackled independently from this side. A very dominant role is always played by the Indian Railways. It has already been clearly projected as to how the prevailing problems may be easily solved with active co-operation from their parts. So, from that angle, the areas where their active co-operation is utterly desired in this context are detailed below.

The fields of co-operation from the Railways to DSP.

1. They may come forward to supply early forecasts of all incoming loads meant for DSP, so that the latter may take up all timewise measures to face the consequences. A good amount of incoming wagon detention at the exchange yard may thus be minimised.

2. Better communication system may be easily introduced from their part to ensure early information.

3. Timely supply of the route-restriction memos may be easily made to help the formation of directional rakes.

4. The change of shift for their staff, posted at DSP, may be made uniform with that of DSP.
5. The service of a responsible executive may be made exclusively available at the exchange yard of DSP to resolve the problems on the spot as far as practicable and this will make easy the flow of operation on the part of both the organisations.

6. The allotment of wagons for outward leading in DSP may be introduced promptly to facilitate the quick disposal of the concerned affairs.

7. Directional rakes may be allotted to ease the flow of traffic operation.

8. Supply of tipplable wagons may be stepped to facilitate quick unloading of wagons at the plant.

9. Rake loading in respect of major incoming materials may be insisted to ease the disposal of wagons in all the cases of operations.

10. The exchange yard should not be used as stabling yard; however, the rake movement in both the ways of traffic operation to and from the plant may eliminate the shunting jobs in the exchange yard to a considerable degree.

11. Electric or diesel loco-power driven steel specials carrying coal from Kusunda depot may be introduced to facilitate closed circuit movement with single type tipplable wagons.

12. The south yard of Kusunda depot may be exclusively reserved for booking loads for Durgapur industrial complex and unitwise specific rakes may be loaded there to facilitate quick disposal of loaded wagons without straining the Kusunda Marshalling Yard.
13. The resolutions arrived at the meetings of the Central Board of Transportation, with which all the parties are concerned, should be strictly followed as far as practicable so that schedules are not hampered in either way in case of any of the concerned parties.

14. Sporadic incidents should be timely taken up to maintain the flow of operation in all respects.

The discussion so far made in the field of traffic operation under Durgapur Steel Plant, has amply shown that smooth flow of communication, and effective co-ordination, co-operation and timely adjustment are the cream of convenient operation in this field. Leadership is usually a dominant factor in this instance and the managerial structure of the plant, specially of Traffic Department, reserves the entire responsibility to gear up the relevant machinery to ensure smooth flow of operation in the field of inward, internal and outward traffic movement for the plant.

During the courses of earlier discussions in this context, attempts have been made to cover the entire field of operation. It has been largely felt that lack of managerial efficiency and not any sort of major mechanical trouble, is the root cause of deficiencies and short-comings in this context. Individual factor taken in isolation in any case, may not appear to be a serious lapse, but their effect is certainly alarming for the organisation.

Durgapur Steel Plant, as an organisation of national importance, is quite often declared as the "Sick-child" of the industry and national economy as well; but it is astonishing to note here that many attempts have so far been made in vain.

to warm up the organisation in general, instead of locating
the real spots of troubles. It is also far more astonishing
to find that the concerned men of the organisation are keep-
ing their eyes closed to the affairs which are very clear a
apparent. It is yet to be decided whether the incompetence
of the concerned men or their irresponsibility is the main
factor behind this poor show. In any case, the current mana-
gerial system, being followed by a group of ill-motivated or
inefficient people who use to project themselves to be some-
ting more than their actual authority and responsibility,
can never be allowed to continue any longer at the cost of
national interest. A close observation will surely reveal
that all these bare facts are the main reasons of the govern-
ments' failure to implement their progressive policies in any
field. The problem is national and as such suitable solutions
must be searched out at any cost for the survival of national
economy.

A child becomes sick when left uncared for overlong
period by his parents, or by those who are supposed to take care.
It apparently indicates that there should be a regular system of
supervision of the affairs which can not run at their own. If
anything at all goes wrong, it directly indicates the utter
inefficiency or insincerity on the part of supervision syst.
It may be mentioned here that an unwilling horse will not run
upto its capacity and it is the clear responsibility of the
jokey to make it willing to run. The human factor of an orga-
nisational structure is the only varying item which is to be
properly motivated in right perspective to achieve the sche-
duled results. What is possible to be done with a group of

willing workers, can never be derived from a section of unwilling people under any favourable circumstances. Nevertheless, various attempts have already been made in DSP to mobilise most of its relevant factors, excepting the most sensitive item, i.e., the human factor. It is really a discouraging instance in the context of the needs of a giant public sector industrial organisation, where all possible machineries are provided to pull the affairs properly. So, it is rightly desired in DSP that steps must be taken to manage properly the "man-in-work" and their relevant affairs. The prosperity of a big concern like Durgapur Steel Plant therefore largely depends upon the objective out-look of the management.

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