Chapter – 5

Depreciation Accounting

➢ Historical background of pricing policy of ACC Ltd and Prism Cement Ltd.
➢ Rational of uniform pricing policy
➢ Changing the cement pricing policy
➢ Fixed assets budget
➢ Fixed assets accounting and audit
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CHAPTER-5

Depreciation Accounting

Depreciation accounting is generally accepted today as a necessary part of accounting books of cement industry in Madhya Pradesh. The reason is obvious because without detailed accounts relating to fixed assets and depreciation. It is impossible to find correct profit and loss of a cement company as well as correct financial position. The important reasons are:

1. The information needed for the computation of depreciation will not be forthcoming fixed assets accounts will furnish a complete history about each and every item of fixed assets of the company.

2. When a fixed asset is scrapped or sold, the desirability of fixed assets accounting becomes apparent.

3. The danger of charging small and partial renewals of fixed assets in repairs accounts in state of capitalizing it in fixed assets account.

4. For calculating loss on retirement or sale of fixed assets or at arriving amount of balancing charge or capital gain on fixed assets.

5. Income tax authorities will not accept the claim of normal Depreciation, extra shift allowance terminal depreciation and investment allowances without furnishing detailed records relating to fixed assets of concern.

In our companies act a detailed disclosure relating to fixed assets and depreciation are required accounting to the schedule VI part I. i.e.
balance sheet. In this schedule following divisions are made for better presentation of fixed asset these are given below:

Schedule-VI

Part-I form of Balance Sheet

Balance Sheet

of.................................................................

(Name of the company/Institute)

As at.................................................................

(The date as at which the balance sheet is made out)

<table>
<thead>
<tr>
<th>Instruction in</th>
<th>Liabilities</th>
<th>Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>according with</td>
<td>Figures</td>
<td>Figures</td>
</tr>
<tr>
<td>which liabilities</td>
<td>for the</td>
<td>for the</td>
</tr>
<tr>
<td>should be made out</td>
<td>previous</td>
<td>previous</td>
</tr>
<tr>
<td></td>
<td>Year</td>
<td>Year</td>
</tr>
</tbody>
</table>

Rs.  Rs.

(b)   (c)

FIXED ASSETS

Distinguishing as for as possible between expenditure upon (a) Goodwill (b) Land (c) Buildings (d) Leas hold (e) Railway siding (f) Plant and machinery (g) Furniture and fittings (h) Development of property (i) Patent Trademarks designs and copy right (j) Live stock and (k) Vehicle etc.
When I studied annual accounts of selected cement companies, I found that except one company remaining other companies are not disclosing their fixed assets in a better and systematic way, which is clearly evident from, the following Table No- 5.1.

<table>
<thead>
<tr>
<th>Name of Companies</th>
<th>Items of fixed assets disclose</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A.C.C Ltd.</td>
<td>Land and roads, water supply and Sanitation, buildings, Railway sidings, Plant and Machinery, Furniture and fixtures, motor vehicles, Tools and equipments, Telephone installation.</td>
</tr>
<tr>
<td>• Birla Corporation Ltd.</td>
<td>Free hold land lease hold land-hold Land, Buildings, Railway siding, Road and water works, plant and machinery Furniture and office equipments Vehicles land,</td>
</tr>
</tbody>
</table>
Repair And Maintenance Policy-

It is important to have all the fixed assets at every time on working order because if fixed assets are not working order, it will create a big loss in the form of loss of customers, wastage of time in the form of idle time, loss of production and increase in overhead rate etc. If normal repairs are not done in regular course of time there is fear of big breakdown of plant and machinery. Thus loss of the time and money, have to the plant and machinery. Thus, repairs and maintenance can be divided into two parts:

(a) Normal repair and maintenance; and
(b) Extra-ordinary repair and maintenance

When I asked to the management of cement industry about the repair and maintenance policy, the management of all the companies where replied in the same turning that they have a regular, repair and maintenance policy and they have engineer to watch of at every stage the need for repair and maintenance.

The management of ACC. Ltd. told that they have a separate repairs and maintenance department and its function is to cheek all the plant and machinery regularly in such a way, that in a week all the plant and machinery can cheek at least once.

When I did talk in an informal way they smiled and told that all the machinery is insured and there is no fear of any loss due to negligence of repair and maintenance. The management of Prism Cement Company Ltd. told that their plant and machinery are insured at re-placement value and there is no loss due to negligence of repair and maintenance. Thus it is better
to have knowledge of insurance policy to study repair and maintenance policy the table no.5.2 showing insurance policy of selected cement companies.

Table No. 5.2

Insurance policy of different Cement Companies

<table>
<thead>
<tr>
<th>Name of unit</th>
<th>building</th>
<th>Plant and Machinery</th>
<th>Furniture and fitting</th>
<th>Motor vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A.C.C. Ltd.</td>
<td>Replacement Cost</td>
<td>Replacement Cost</td>
<td>Nil</td>
<td>Comprehensive</td>
</tr>
<tr>
<td>• Prism Cement</td>
<td>Original Cost</td>
<td>Depriaciated Cost</td>
<td>Nil</td>
<td>Comprehensive</td>
</tr>
<tr>
<td>• Birla Corporation Ltd.</td>
<td>Original Cost</td>
<td>Depreciated Cost</td>
<td>Nil</td>
<td>Comprehensive</td>
</tr>
</tbody>
</table>

Above Table showing insurance policy of cement industry the first important point is that there is no insurance for furniture and Fitting of any cement company under study. Building is insured at replacement cost in one company and in rest two companies building are insured on original cost. In the case of plant and machinery insurance policy is of three types namely; replacement cost, original cost and depreciated cost. There are three type of insurance policy in regard motor vehicles, i.e., comprehensive, third party, accidental but all companies’ comprehensive policy is taken for motor vehicles.
In my view for Selected cement industry it is better to name an insurance policy based on replacement cost for building, plant & machinery and for motor vehicles purposes a comprehensive insurance policy is suggested.

**Historical background of pricing policy of Cement:**

In 1942 when cement was brought under price control, the Government of India fixed the admissible to cement manufactures on a ‘cost plus’ basis. In 1946 the prices were re-fixed on the basis of cost of production of ACC units, as it was the single biggest group producing cement in the country. The prices thereafter were fixed basically upon the recommendations of the Tariff commission. In 1953, the commission was first time requested to suggest a fair works cost commissioned had recommended differential returns of law, medium and high cost units, besides the rehabilitation allowance for older plants in 1958. In 1961, the commission suggested ten differential retention prices based on a uniform 14 percent return on capital employed. The Government of India also allowed different retention prices in the light of the recommendations of the tariff commission.

The Government often expressed the view that ‘A system of differential based on individual cost was not conductive to efficiency and greater production, and a uniform price for the industry’ as a whole, would have the effect of compelling the high cost unit to seek economies and provide a measure of reward to those units able to achieve them. When prices admissible to producers are too firmly with costs, the manufactures
have no cumulative reason to adopt cost reducing measures. A uniform price, on the other hand, taxes the decreasing return units and subsidizes the increasing return units. The measure will have the desired impact, provided the less efficient firms have the desired impact, and provided the less efficient firms have the freedom and means to alter their scales as well as methods of production to improve their scales as well as methods of production to improve their affiance and economies the costs. Under the condition of industrial licensing, such a choice would at best be a theoretical possibility. The choice gets further narrowed when we also consider resource endowments, high investment costs per relocation of units and alteration in sales of production of the units faced with losses over the past years.

The Tariff commission viewed the differential prices are paramount need to ‘Simulative the planned expansion of the industry to keep pace with the steadily rising demand in the country and fulfill the target set in the plan. According to the commission, the prices recommended by it should serve the following objectives:

(a) Units, which exist at present must be encouraged to maintain production at the highest possible level consistent with proper maintenance of plant and machinery. The low cost units should have sufficient inducements to expand while the high cost ones should not be impaired in their capacity for production and

(b) The new capital should continue to be attracted to this industry and Even small units should have a chance to get established and developed.
Thus, the argument in favor of differential prices rests primarily on the need to create conditions to increase production. Increase in production can be units to maintain their production through an appropriate price policy. The government accepted the strength of this logic and continued with differential prices till 1969, when a uniform price structure was introduced for the first time in the country.

**Price Control:**

The price structure of a commodity reflects the sum of its manufacturing cost and the profit needed for ensuring liability and growth of the industry producing that commodity. Fixing the fair prices is a technical and delicate task because number of theoretical and practical problems surrounding with the industry. It is difficult to identify a representative unit or a group of units, which can serve as a basis for fixing retention prices. This problem looks almost insurmountable in industries, which are predominated by units with different cost schedule, different sales of production, diverse manufacturing process and using various grades of raw materials with different prices. Cement industry is the classic example of this variety.

Therefore, controlled prices were fixed after on inquiry by the following tariff commissions and high power committee’s appointed by the central government for the purpose –

1- Deference of India rules, 1942  
2- Tariff commission, 1953  
3- Tariff commission, 1958  
4- Tariff commission, 1961
5- Tariff commission, 1974
6- High power committee, 1978

In the categories of cement prices, there are four important, i.e., retention price, F.O.R., destination price and retail price for packed cement. The first category of retention price relates to what is payable to the manufacturer for non-packed cement. It is an ex-factory price, which is fixed by the government time to time. The F.O.R. price comprises retention price, central excise duty, and packing cost, incidental and uniform freight charges. The retail price of cement includes F.O.R. price, central sales tax, state sales tax and octroi, besides incidental expenses. Each individual component of the cost is the fixes by the government, so that the F.O.R. price of cement is uniform throughout the country. The retail price of cement varies because of variations of sales tax and octroi rates in different states where cement is sold.

**Price control – Genesis and objectives:**

Non-competitive conditions are today a fact of life in some developed and many developing economies. In the present day economies, the basic assumptions made for the success of price mechanism to achieve supply demand balance and price stability do not hold good, as periodic physical scarcities of commodities, heterogeneity in the process of manufacture, variations, in input prices etc. stand in the way of efficient operation of free market forces. Economists and administrators, therefore, advocate substitution of control on prices of a commodity and its distribution, voluntary or statutory type, in place of market mechanism, as the latter is regarded as in-efficient instrument to ‘held and price line’ and
channel investment to priority sectors. Making a policy of the prices by a statutory authority is considered an in-escapable measure to meet shortages in essential consumption and investment goods of developing countries. Physical scarcities of commodities are an avoidable feature of these economies where investment is raised to higher levels, while actual production takes place after a time lag. Direct controls are also justified on the ground of economic logic that they prevent all these units of demand, which have a higher marginal demand price but lower social value. The commodities generally chosen for imposition of controls are basic consumer as well as investment goods. Cement comes under the latter category.

Barring a few years in the past demand of cement had always out stripped supply. The country had launched massive construction programmes for irrigation and industrial development. Since these programmes required large quantities of cement, price had to be regulated and its supply directed to the more important purposes. The balance output of cement left after meeting priority needs to be released to the general public, again at predetermined prices, to prevent the exploitation of the consumers.

The instruments chosen for attaining the above policy goals are:

- A system of retention prices to manufacturing units.
- A uniform price to consumers in all parts of the country through a freight equalization arrangement and
- Allocation of available output to various consumers according to predetermined priorities.
It is debatable whether efforts of the government in effecting a rational allocation of available supplies among competing users at equitable prices have been a success or not priority sectors, which include public construction generally, received the cement of their requirement while non-priority users sometimes paid higher prices to get the quantity needed by them.

As stated earlier, an integral part of the price control mechanism is the fixation of fair prices to industrial units producing cement. In fixing retention prices, the government’s avowed objective is that the industry should remain viable and generates funds for its growth, preventing at the same time the excessive profit earning by it.

Rationality of uniform price:

A single uniform price for all units in the cement industry would be a logical and justifiable on these grounds:

- The unit comprising the industry have a more or less similar cost structure; and
- The different that exist, if any are purely due to efficiencies.

The cement units in the country displayed a wide divergence in their cost of production. It was noted that these cost disparities arose not always due to the differences in the quality and competence of the management but more frequently ascribed to the following reasons:

- Variations inquiring and other assembling costs of lime-stone;
• Quality of limestone available;
• Age of the plants and manufacturing technology employed;
• Labour employed per tone of cement production; and
• The rate at which coal and power are procured by individual units.

In the absence of a comprehensive productivity study of units, it is not possible to identify the scope for cost reduction. If replies from individual cement units are any guide, some of them are facing problem of eliminating wastes and reducing costs, while such efforts are welcome, their impact on narrowing the present cost difference among units appears to be minimum. The cost review had shown that the management has limited choice in the matter of certain costs. The case of fuel and power costs is an instance, which proves the impossibility of minimizing cost differences. Equation of coal costs are precluded as its transportation costs differ widely from unit to unit, through the pit head prices are more or less the same. Similarly, due to variation in the power tariff between the states, power costs cannot be reduced to points within narrow limits. Limestone assembly costs also varied from unit to unit largely due to reasons beyond the control of management. If it is accepted that existing cost differences between cement producing units arise due to the factors beyond the control of management, the argument in favour of a uniform price as an instrument to affect cost reduction has limited validity.

**Use of weighted average cost for price fixation:**

If fixing of uniform price for all cement units is illogical, calculation of a uniform retention price on the irrational an average might
prove a sound basis for determination of retention prices. If manufacturing
cost of individual units cluster around the average. As this has not been
found to be the case with the cement producing unit’s weighted average cost
cannot be realistic yardstick for fixing the price of cement.

Moreover, in the principle of averaging, high cost units always
stand to lose, as many items of their actual expenses are not fully
neutralized. On the other hand, low cost unit get over compensated for
expenditure not incurred by them. A pertinent case worthy of detailed study
is transport cost of coal. The tariff commission (1974) had found that the
average transport lead on coal comes to 975 kilometers for the units
surveyed by it. This formed the basis for computation of transport cost of
coal in the retention price recommended by it.

The government adopted the basis for compensation of
subsequent increase of costs under an escalation clause. This system of
freight reimbursement on coal works is a disadvantage to these units located
at distances in excess of the average distances, as their actual expenses are
not fully neutralized under this system. As on September 1974, the weighted
average transport load on coal for the Tamilnadu and Gujarat unit was 1845
kilometers and 1839 kilometers respectively and actual freight paid by them
worked out Rs. 77 per tone. As against this only Rs. 48.60 per tone is
actually admitted in the price built-up by the Tariff commission. Initially the
units absorbed this loss as concession tariff was applicable on a long
distance movement of coal till 01.04.1974 and location advantages enjoyed
by them partly neutralized this disadvantages from 1974-75, however
railways revised the coal tariff which, in effect terminated the subsidies
available to coal consumers situated parties from coal fields. This aggravated the cost disadvantage of the units in these parts.

**Changing the cement Pricing Policy:**

In 1974 the Government retained the uniform retention price but rejected the rehabilitation allowance as also the creation of the revaluing fund for establishing new plants with one million tone capacity. The price so fixed was uneconomic, the implementation of the escalation clause was tardy, the increase in retention price granted after much delay. The growth of the industry has been very slow and halting till the eighties and modernization was then unthinkable for lack of incentive and capacity of funds. The situation changed for the better when in 1977 government announced their policy to grant 12 percent post tax return on net worth to new units.

In December 1978, the high level committee of Lavraj Kumar appointed by the Government recommended a new price structure based on costs prevailing at that time. The Government Introduced a 3-tier price structure for low, medium and high cost units and a special price for new undertaking and substantial expansions. These prices were recommended on the basis of 85 percent capacity utilization, various cost elements and 12 percent post tax return on net worth. The price was announced after a delay of 10 months, ignoring the cost escalation in the intermittent period. Price was to be reviewed annually, though the recommendation was for a quarterly review.
Price decontrol and changes in pricing since 1982 -

On the line of 1977 pricing policy the partial decontrol policy was introduced from Feb. 28, 1982 in cement prices, which gave a further, fill up to the industry and market a turning point in its history. The finance minister announced a scheme of ‘levy’ and ‘free’ cement with a dual pricing policy. Accordingly, the levy price are administered by the government through the public distribution net work, while the free component (which at the time was fixed at one third of production) could be marked by companies through there own channels at open market prices.

Before, January 1982 there have been sizeable and continuous increases in the manufacturing cost of cement due to sharp spurs in the input costs, mainly due to government’s own action over which the industry has no control. The cement manufacturing association (CMA) has been representing to government from time to time and the total price escalation claimed by it to neutralize the increase in cost amounted to Rs. 149.88 per tone during the four year period 1982 to 1985 as against this claim, government has granted so for only Rs. 91 per tone, made up partly by a price escalation of Rs. 40 per tone and partly by a marginal reduction in the levy quota from 66.6 percent to 65 percent of the installed capacity for the existing units with effect from 18th July, 1984, and a further reduction in the levy obligation from 65 percent of the installed capacity to 60 percent of actual production, effective from 4th June, 1985. Government at Rs. 51 per ton the uncompensated balance due to industry works out to Rs. 58.88 per tone has computed the final implication of the reduction in the levy quota. There has been a further hike of the order of Rs. 10 per ton since January, 1986. The net result was that a sum of Rs. 68.88 remains uncompensated.
Apart from the four input costs covered by the BICP formula, there are other cost components, which have materially gone up and have to be borne by the industry. Their incidence may be estimated at about Rs. 30 per tone.

With the increased availability of cement, both levy and non-levy, there has been a market-declining trend in the market prices of non-levy cement. Squeezed between the mounting cost increase, on the one hand and a marketed downward trend in non levy prices, on the other almost all cement units are losing on sales of levy cement and there is a yawning gap between the assured 12 percent post tax return and the actual weighted average realization of the industry which at present is less than 5 percent on net worth. That time the levy price of Rs. 375 (335 + 40) per tone is much less then the average per ton cost of Rs. 550 to Rs. 575 of the industry. It is both unjust and inequitable to subsidies levy consumers by asking the industry to supply levy cement at price below the actual cost of production. Government should in all fairness accede to the legitimate demand of the industry and sanction with out any further delay. The balance of escalation due till date and mitigate the hardships of the industry.

In this context, it is pertinent to note the recommendation of the planning commission’s working group for the seventh plan that “unless reasonable returns are ensured such massive Investments (of the order of Rs. 450 crores per year to create new capacities licensed for the Eighth and ninth plans) are not likely to fluctuate. Escalations on retention prices at periodic intervals are essential to achieve this objective. Since increases in input costs are due to Government action a fair approach seems to be to have a built in provision for automatic adjustment of the levy price to
neutralize their incidence effective from the date of the cost increase. If for any reason, this is not considered feasible, a high power Review committee may be constituted to review the question of price escalation once in every six months, more or less on the lines of the committee for the fertilizer industry. So that the industry is realization of 12 percent post tax return does not get eroded as this happened now.

Government has provided special relief in levy obligation to sick units as well as new units at the same rate. Government originally designed fifteen units as ‘SICK’ and the sickness benefit in the form of a lower levy obligation were extending on a year-to-year basis. After examining the position in consultation with BICP, Government has continued the sickness concession to 9 units for varying periods for two units up to 1986-87, for 6 units up to 1987-88 and for one unit up to 1989-90. The performance of these needs to be closely and regularly monitored to ensure that the sickness benefit is not abused and that the sick units actually take necessary appropriate steps and become economically viable within the schedule time frame.

New units may be considered under two categories, those which came into production during the period 1982 to 1985 i.e., the existing new units and those which will be commissioned during the seventh plan period, i.e., the future new units. The capital cost, which was adopted by the BICP in 1979 at Rs. 650 per tone of installed capacity, went up to Rs. 1000 in 1981-1982, Rs. 1300 in 1983-1984 and further to Rs. 1500-1600 in 1986-87. The relief given to new units in the form of reduced levy obligation of 40 percent of actual production is grossly inadequate, with their high
interest and depreciation charges, coupled with a step fall in non levy prices, materially below the ceilings recommended by the C.M.A., the existing new units are facing a serve financial crests. The prospects of future new units at green sites are still worse.

It is apprehended that under the prevailing high capital costs and low non-levy realization, they will all be born sick. The association has therefore represented to government to extend certain additional relief to those two categories of new units to enable them to become economically viable. It is gratifying to learn that these are under government’s (presumably favorable) consideration. We earnestly urge government to provide the required reliefs urgently. At present there is no control on prices of cement.

In conclusion, what the industry looks for is the assured return of 12 percent post tax, which has been responsible for the spectacular growth of the industry in terms of expansion of capacity and production, modernization, etc. Any failure on this front may shake the confidence of the entrepreneur, and while the capacity target for the seventh plan may materialize, as most of the new projects are already in pipeline, the expansions set for the eighth and ninth plans raising the capacity to 100 million tones in tenth five year plan. The production of cement increase more than 50 percent and reached 157 million tones by the turn of the century as well as modernization may well be in serious jeopardy. Government should therefore announce a national policy for cement reassuring the industry of 12% Post tax return to sustain the interest of entrepreneurs and enable cement units to undertake long term planning for
modernization and expansion to meet the capacity targets set for the future five year plans.

**Fixed Assets Budget: -**

Forecasting and budgeting of fixed asset is a vital part of the policy making in the cement industry. The Second World War has stimulated a genuine and lively interest on the part of the management of cement units to replace their old and obsolete plant and machineries. Almost all cement units have expanded their fixed assets and other means for increasing their volume of production and improving quality of the cement. Innovating is often the means of continuing to make maximum profits in the unit. Investment in fixed assets, both for replacement and new projects, go hand in hand with the progress of the unit. Unless the plant and machinery can be utilized fully, the investment in the depreciable assets is a doubtful proposition. Only by careful analysis of each project in terms of possible annual profit earned by the unit will be a sound decision that is possible.

The urgency of the need for certain fixed asset may arise from one or a combination of a number of factors. The development of new product expansion of the output needs to reduce cost and requirement safety is the main factors. Budgeting of depreciation, repair and maintenance, interest and use of fixed asset is necessary for showing the possibility of expending the production facilities to cover additional sales showing in the sales budget. It provides the alternative forms of assets to be considered as replacement for fixed assets, which are wearing out or are in danger of becoming obsolete. It is useful when considering methods of reducing costs.
A cost reduction campaign may necessitate the consideration of purchasing more up to date fixed assets. The capital cost of improving working conditions or safety can be obtained through fixed assets budget.

In the present study one unit followed return on investment method and net gain method for assessing the profitability of fixed assets, one unit return on investment method, present value method and trail and error yield method. While the rest one unit trail & error method, yield method, present value method and pay book method.

It is good, if every cement unit follows present value method in pay back method. These arguments may be given in favour of above two methods. When we consider different investment with earning patterns, which are the same at that time, we can make any valid comparison by discounting earning to present values. In this way, we can consider timing of the receipt as well as cost incurred at different intervals. Present time is very charging and new leading units introduce inventions so pay back method is most suitable. It shows how quickly the investment in a fixed asset will be recorded. For the cement unit which is experiencing rapid technological development the limited pay back period is good because it offers some protection from the danger of obsolescence.

**Fixed Assets Accounting and Audit:**

The position of an auditor is extremely awkward. The auditor has to certify profit and loss account and balance sheet as to whether they represent the true and fair view of state of affairs of the unit. If provision for
depreciation is not made or provision is inadequate the result will be the inflation of earnings and balance sheet will not represent the true financial position of the unit. The auditor is not a technical 'know how' and hence he is not in a position to know about the adequacy or inadequacy of the provision for depreciation and working life of fixed assets. But if auditor is of the view that provision for depreciation is inadequate, he must disclose this fact in his report with quantity of inadequacy.

In the present study following cases arise, where provision for depreciation is in adequate and auditor discloses this fact in his report. Study of the auditor's reports of the various cement units under study revealed certain significant facts about the provision of depreciation and fixed assets revaluation in these units. A careful study of these reports showed that the Acc Ltd made no provision for depreciation in 2000 to 2002.

The remarks of auditor's of the ACC Ltd. are with quoting "No provision for depreciation have made by the company during the year."¹ Like same above discrimination of interest is also maintained by the auditors in the prism cement in the year 2000. Like the Prism Cement has not recorded fixed assets register so that auditors could not know about re-organization and discrepancies. Auditors has maintained in his record in the year 2000 to 2002.

It becomes evident that the unit could not make any provision for depreciation, which was largely due to absence of any profit earned by the unit. By discussion with chief accountants/financial managers of these

units that main reasons for not providing depreciation on lease hold property were that the Income-tax act and companies act did not enforce the provision for such depreciation, and in the profit and loss account charge under the head 'Royalties' was made against the revenue. The auditors of cement units under study have paid special attention in their reports to the provision for depreciation by the units, which is certainly a very healthy tradition set by them.

However, it is suggested that the auditors of the cement unit should keep the following objectives in their mind at the time of the verification of fixed assets. They should see whether or not the provision for depreciation has been consistently and correctly made and that it results in a reasonable periodic charge to profit and loss account. To check that fixed assets should held under companies ownership, there are physically present or not and for valuation of fixed assets auditors must take the certificate by the management. The auditors must satisfy themselves that the units policy of accrual, retirement, valuation and adjustment are consistently with those of past year are also satisfactory. They should try to encourage internal studies and rates, bases and methods of providing depreciation.

**Programme For Fixed Assets Audit:**

It is good if the following points were considered in making audit programmes for fixed assets for cement industry. First of all auditor should try to examine the profit and loss account, balance sheet, auditor’s report, director’s report and chairman’s speech of the previous financial years and make an enquiry about the system of internal check for
depreciation and fixed assets and judge whether it is efficiently conducted. He makes an enquiry about the name of the persons who write the books of accounts relating to depreciation and fixed assets and also obtain the specimen signatures of those officers. He must verify the cash purchase of depreciable assets with the cash memos received from suppliers and verify the payments for depreciable assets in the bank with the passbook and the counter-folios of the chequebook. Also verify top payments to the supplier for the consideration of depreciable assets with the received from suppliers. He must vouch the assets have been entered into plant register.

He must check the entries about fixed assets with documentary evidence, correspondence, agreement, memorandum of articles and association, minute books of the board of directors. He must prepare a summary schedule of depreciation expenses for the major fixed assets as classified in the fixed assets, ledger accounts, listing opening balance, provisions made during the year, transfers, deductions and closing balances. He must verify the provision for depreciation and deductions made in the provision for depreciation account on account of sales, discard or demolition of the fixed assets. He must see the method of valuing life of the asset and if the method of providing depreciation is in appropriate than give suggestions. He checks the scrap value of fixed assets, rate, basis and method of providing depreciation. He must review the fixed assets policy set forth in the units manuals or the other method in use are carefully designed and intended to allocate cost of fixed assets equitably over their useful lives.
He can discuss with management the possible need for recognition of extra-ordinary obsolescence resulting from investments or economic development. He can compare the percentage relationships between provision for depreciation and related fixed asset accounts with that previews year as well as with other units and discuss significant variations with management. The tariff board 1948 was of the view that depreciation was allowed on the rates prescribed for income tax purposes. It was about 4% of the gross block.

The tariff commission 1962 was also of the view that depreciation is calculated as per Income-Tax Act, 1961. It was approximating to 3 percent of production cost or 4 percent of block. Thus, we can say that board and commission did not subscribe to the view that depreciation should be calculated on the basis of replacement cost estimates. It was argued that replacement cost were often arbitrary. They preferred to have historical cost basis suggesting the additional sums provided for replacement cost should be regarded as reserves and to be treated such in accounts.

Thus we can conclude that this approach towards provision of depreciation has not kept pace with progress and the need of cement industry. It is suggested that depreciation may be allowed at replacement cost as is allowed in case of cement industry.
Fixed Assets Accounting and Ratio Analysis:

Here significant ratios have been used for making an analysis of relationship between depreciation, fixed assets, profit, long-term borrowing, net worth some other relevant items of balance sheet and profit and loss account in cement Industry. A ratio is nothing but simply one number expressed in terms of another. It is an expression of relationship spelt out by dividing one figure into the other. A percentage is one kind of ratio in which the base is taken as equaling 100 and quotient is expressed as “per hundred” of the base the ratio serve many purpose. They can assist the management of a cement unit in basic functions, forecasting, planning, co-ordination, control and communication. Some of the main advantages of ratios relating to fixed asset accounting are given here.

The plan made by the management can be “Sign posted” by these ratios. These ratios become an integral part of the accounting and budgetary control system. The past ratios indicate trends of important facts of a unit. Therefore, ratios become helpful for forecasting like event in future Control of performance as well as control of costs may materially be assisted by the use of ratios. Through ratios management of cement units becomes in a position to summarize and simplify the masses of the data. Through ratios an invaluable aid to the management of a cement unit can be provided and also to other persons who are interested in analyzing the operations and state of affairs of the unit. Through ratios the efficiency of a particular unit can be measured by comparing its past ratios. Inter firm comparison is also possible with the help of ratios. That is to say, a unit’s performance can be compared with that of other unit’s or industry as a
whole. Through ratios the efficiency of a unit from one period to another can also be measured.

The ratios by themselves are not conclusion. Inferences must be drawn from the ratios and for this purpose ratios must be drawn first. Certain criteria to interpret the ratio must be established first. A single ratio is of limited value. It is so because trends are of great importance. A change in one ratio may be of significance only when viewed in relation to another ratios. Ratios will be scanned for any intrinsic meaning they may process; these ratios will be supplemented by further ratio analysis. The ratios will be studied over time and ratios will be compared with the ratios of other units. It will help us in determining the relative position of the unit as well as the degree of the conformity of units trend to the trend of the industry.

**Ratios for Depreciable Assets Accounting:**

Many types of ratios may be used for analyzing fixed assets. With the help of the following ratios, the relationships between the fixed assets and other items of balance sheet and profit and loss have been analyzed. These ratios have been calculation from the data contained in the financial statements. The following are the main ratios for analyzing the fixed assets accounting:

(i) **Depreciable Assets to Net Sales:**

Sales commensurate to the investment in the fixed assets is an important measure of the efficiency and profit earning capacity of the concern, because higher the sale per rupee of fixed assets, the greater is the
intensive utilization of fixed assets. Low sales in relation to fixed assets means under utilization of fixed assets. But too much sales may be an indication of over trading. Following Table no.5.3 shows ratio of fixed assets to net

Table No.5.3

Ratio of Gross Fixed Assets to Net Sale Of Selected Cement Companies

<table>
<thead>
<tr>
<th>Year</th>
<th>Name of Company</th>
<th>In percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACC Ltd.</td>
<td>PRISM Cement</td>
</tr>
<tr>
<td>2000-01</td>
<td>85.57</td>
<td>48.64</td>
</tr>
<tr>
<td>2001-02</td>
<td>90.57</td>
<td>53.73</td>
</tr>
<tr>
<td>2002-03</td>
<td>79.58</td>
<td>56.52</td>
</tr>
<tr>
<td>2003-04</td>
<td>86.65</td>
<td>65.92</td>
</tr>
<tr>
<td>2004-05</td>
<td>95.65</td>
<td>74.22</td>
</tr>
<tr>
<td>2005-06</td>
<td>68.78</td>
<td>94.99</td>
</tr>
<tr>
<td>2006-07</td>
<td>119.00</td>
<td>118.68</td>
</tr>
</tbody>
</table>

Source: Report of Stock Holding Corporation of India Ltd.
Source: Annual report of concerning cement companies.
According to analysis of Table No. 5.3, we can say that in 2000-01 in ACC Ltd. the net sales was 85.57 percentage of gross fixed assets, while in Prism cement and Birla Cement Corporation Ltd. this ratio was respectively 48.64% and 69.2% only. In 2004-05 this ratio up in all three selected cement companies and in ACC and Prism cement this ratio was 95.65% and 74.22% respectively, while same time in Birla corporation Ltd. net sales was more than (129.96%) gross fixed assets. In 2006-07 all three selected cement companies net sales was more them their gross fixed assets, and ratio was gone up ACC, Prism cement & Birla Corporation by 119%, 118%, 68% and 135.66% respectively.

(ii) Net Fixed Assets to Net Worth:

It is the duty of shareholder to finance the purchase the fixed assets of the company. Therefore, shareholder’s equity (share capital and reserve and fund) should be equal to fixed assets, i.e., ratio should be 1:1. If fixed assets are more than shareholder’s equity, then it shows that some fixed assets are financed out of borrowed capital and any withdrawal of borrowed capital by the lenders will put the company in difficulties. Coverage of fixed assets are not covered by tangible net worth, may not have a chance to service. In fact, the tangible net worth of the company must be more than the fixed assets so that a portion of the working capital is provided from permanent owned funds. Sometimes a deviation is made in the above ratio; instead term loans are also included to see the solvency of the concern. This is because in certain types of business where large properties are held, it is quite usual for secured loans to cover a large proportion of the fixed assets.
<table>
<thead>
<tr>
<th>Year</th>
<th>ACC Ltd.</th>
<th>PRISM Cement</th>
<th>BIRLA Corporation Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>272.56</td>
<td>259.89</td>
<td>126.88</td>
</tr>
<tr>
<td>2001-02</td>
<td>238.68</td>
<td>246.39</td>
<td>133.21</td>
</tr>
<tr>
<td>2002-03</td>
<td>219.98</td>
<td>239.92</td>
<td>142.89</td>
</tr>
<tr>
<td>2003-04</td>
<td>175.49</td>
<td>232.15</td>
<td>126.15</td>
</tr>
<tr>
<td>2004-05</td>
<td>157.05</td>
<td>193.7</td>
<td>95.16</td>
</tr>
<tr>
<td>2005-06</td>
<td>136.01</td>
<td>137.55</td>
<td>130.95</td>
</tr>
<tr>
<td>2006-07</td>
<td>92.99</td>
<td>87.78</td>
<td>77.68</td>
</tr>
</tbody>
</table>

Source: Report of Stock Holding Corporation of India Ltd.
Source: Annual report of concerning cement companies.
Table No. 5.4 shows the Ratio of Net fixed assets to Net worth shows the environment or condition of fixed assets and net worth by comparison. If in any concern have more net fixed assets than net worth, called healthy financial structure. According to table no. 5.4 it show the net fixed assets to net worth ratio of ACC Ltd., Prism cement and Birla Corporation. In ACC Ltd. & Prism cement, this ratio is decreasing every year and in 2006-07 this ratio is nearly one third ratio of 2000-01. In Birla cement corporation, the net fixed assets to net worth ratio is fluctuated and decrease in 2006-07 more than 50 percent and gone up 77.68 percent. So we can say tat all studying cement companies increasing their fixed assets regularly and it is indication of more use of funds.

(iii) **Return On Capital Employed:**
Properties, invest money in a business to obtain a satisfactory return on their capital, which is invested in all types of fixed assets, like motor vehicle, plant and machinery, furniture, fixtures and land and buildings, etc. The return of this nature will be affected by various factors like risk of inflation, fluctuations in external economic conditions, etc. It is also in shareholder’s interest, so they want to know the actual financial position and profitability of their company. This Ratio is used to show the efficiency of the business as a whole.

It is very popular ratio in the field of financial management; it is used for various managerial decisions. Finally, we can say that this ratio is calculated to judge the overall performance of the cement company. The
Table No. 5.5 shows the ratio of return on capital employed of selected cement companies in Madhya Pradesh.

**Table No. 5.5**

**Ratio of Return on Capital Employed**  
(Net profit/Capital employed)  
In percentage

<table>
<thead>
<tr>
<th>Year</th>
<th>ACC Ltd.</th>
<th>PRISM Cement</th>
<th>BIRLA Corporation Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>7.69</td>
<td>-53.38</td>
<td>0.87</td>
</tr>
<tr>
<td>2001-02</td>
<td>8.37</td>
<td>-60.91</td>
<td>1.45</td>
</tr>
<tr>
<td>2002-03</td>
<td>9.65</td>
<td>-72.85</td>
<td>1.89</td>
</tr>
<tr>
<td>2003-04</td>
<td>14.79</td>
<td>-18.23</td>
<td>16.87</td>
</tr>
<tr>
<td>2004-05</td>
<td>23.68</td>
<td>30.63</td>
<td>28.72</td>
</tr>
<tr>
<td>2005-06</td>
<td>24.89</td>
<td>29.78</td>
<td>33.56</td>
</tr>
<tr>
<td>2006-07</td>
<td>39.19</td>
<td>46.88</td>
<td>49.65</td>
</tr>
</tbody>
</table>

Source: Report of Stock Holding Corporation of India Ltd.  
Source: Annual report of concerning cement companies.
When we want to know overall performance of any concern, need some analysis of ratios. In this regard the return on total capital employed ratio is very important to calculate or analysis return of capital employed. It is shows in Table No. 5.5, the studying cement industry. A.C.C. Ltd. gets 7.69 percent and Birla Corporation Ltd. get Only 0.87 percent return on their capital employed in 2000-01, but Prism cement was loss 53.38 percent of their capital employed. These ratios increase up to 2002-03 and reached 72.85 percent. After following year Prism cement's loss down up to 18.23 percent of their capital employed. Next year 2004-05 Prism's performance was very satisfying and first time Prism get profit of 30.63 percent of their capital employed. At the end of 2006-07 the Prism's cement get 46.88 percent profit of their capital employed while A.C.C. Ltd. net profit increasing every studying year 2000-01 to 2006-07 the net profit was 39.19 percent of their capital employed. Birla Corporation Ltd net profit was nominal (1.89%) till 2002-03, but after this year, Birla Corporation Ltd. Get net profit 16.87 percent in 2003-04. Birla Corporations performance was best in 2006-07 and corporations get net profit half (49.65%) of their capital employed. So according to this analysis we can say that at the end of 2006-07 all studying cement industries maintain forthcoming year.

(iv) Fixed Assets to Funded Debts Ratio:

In this ratio, there is comparison of funded debts with the fixed assets on which the bondholders have a prior claim. This ratio shows rough idea of the degree of the protection to the bondholder's. For this purpose the ratio of fixed assets to funded debt is used, which is calculated as under:
Ratio of fixed assets to funded debts = \( \frac{\text{Gross blocks}}{\text{Funded debts}} \)

This ratio shows as supplementary major to determine security to the bondholder, this ratio determines what parts of fixed assets and the long-term creditors finance and what part by owners. This ratio is important to both long-term creditors and the owner’s of the business. In other words, it shows that how many times fixed assets cover bondholder. The table 5.6 shows the ratio of fixed assets to funded debts of selected cement companies of Madhya Pradesh.

**Table No. 5.6**

**Ratio of gross block to fund debt of selected cement companies**

<table>
<thead>
<tr>
<th>Year</th>
<th>ACC Ltd.</th>
<th>PRISM Cement</th>
<th>BIRLA Corporation Ltd.</th>
<th>In percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>161.42</td>
<td>138.76</td>
<td>230.30</td>
<td></td>
</tr>
<tr>
<td>2001-02</td>
<td>226.33</td>
<td>172.35</td>
<td>217.32</td>
<td></td>
</tr>
<tr>
<td>2002-03</td>
<td>260.76</td>
<td>180.93</td>
<td>258.90</td>
<td></td>
</tr>
<tr>
<td>2003-04</td>
<td>285.53</td>
<td>201.93</td>
<td>285.53</td>
<td></td>
</tr>
<tr>
<td>2004-05</td>
<td>271.63</td>
<td>254.63</td>
<td>289.46</td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>432.01</td>
<td>553.43</td>
<td>432.00</td>
<td></td>
</tr>
<tr>
<td>2006-07</td>
<td>624.54</td>
<td>Nil</td>
<td>624.33</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Report of Stock Holding Corporation of India Ltd.*
*Source: Annual report of concerning cement companies*
In 2000-01 A.C.C. Ltd fund debt was 161.42 percent of their gross block and its ratio increases every year except 2004-05. At the end of 2006-07 this ratio, Increase nearly 4 times (624.54) than 2000-01. It means gross block are increase and debt are decrease continuing. In Prism cement the gross block are 138.76 percent of debt during 2000-01, but it increase 4 times in 2005-06 (553.43%) it mean gross block increase and debt decrease in 2006-07. Prism cement has no any type of debt. In 2006-07 Birla corporation Ltd gross block to fund debt was 330.30 percent in 2000-01 and it some increase in next two years; but in 2003-04 this ratio jumped by 513.91 percent of debt. According to this analysis we can say that in all studying cement companies performance are very satisfying.

(v.) Net Profit to Fixed Assets Ratio:

Ratio of net profit to fixed assets is calculated for measurement of profitability of the enterprises. This ratio indicates the earning on fixed assets independently to the sources of funds invested in them. The return on funds invested in the fixed assets is an overall measure of the efficiency of business. This ratio shows that how many percentage of profit earn on the fixed assets, if this ratio is high, it shows that company is in a good position to earn profit in relation to fixed assets. The table No. 5.7 shows the ratio of net profit to fixed assets.
<table>
<thead>
<tr>
<th>Year</th>
<th>ACC Ltd.</th>
<th>PRISM Cement</th>
<th>BIRLA Corporation Ltd.</th>
<th>In percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>3.58</td>
<td>-9.37</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>2001-02</td>
<td>3.83</td>
<td>-8.45</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>2002-03</td>
<td>4.01</td>
<td>-7.82</td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td>2003-04</td>
<td>6.99</td>
<td>-1.53</td>
<td>10.03</td>
<td></td>
</tr>
<tr>
<td>2004-05</td>
<td>11.73</td>
<td>6.78</td>
<td>16.58</td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>15.41</td>
<td>17.45</td>
<td>17.97</td>
<td></td>
</tr>
<tr>
<td>2006-07</td>
<td>30.61</td>
<td>38.18</td>
<td>34.12</td>
<td></td>
</tr>
</tbody>
</table>

Source: Report of Stock Holding Corporation of India Ltd.
Source: Annual report of concerning cement companies.
According to table no. 5.7, in 2000-01, the ACC Company earned net profit only 3.58 percent of fixed assets. But after this net profit increasing regularly every year. ACC’s net profit to fixed assets was in 2005-06 only 15.41 percent, but next year (2006-07) it doubled and goes up 30.61 percent. Prism cement was suffered from loss during 2000-01 to 2003-04. But after this (2004-05) it earned profit 6.78 percentage of fixed assets. It is surprising that in 2006-07 Prism’s profit increasing about four times (38.19%) of 2004-05. Birla Corporation gets nominal profit during 2000-01 to 2002-03 but after this it also gear up and profit achieve 17.97 percent of fixed assets. Next year (2006-07) it’s profit double and go up 34.12 percent of fixed assets. So above analysis we can say that all studying cement companies doubled their profit in 2006-07 than 2005-06. It is very good indication of studying cement companies for their investment development and betterment.

(vi) Depreciation as Percentage of Net Sales

This ratio establishes relationship between the amounts of sales and depreciation during the years. It shows the share of depreciation with sales. The Table No.5.8 shows the ratio of depreciation as percentage of sales, which is given on next page:
Table No. 5.8

Ratio of Depreciation to Net Sales of selected Cement Companies

<table>
<thead>
<tr>
<th>Year</th>
<th>ACC Ltd.</th>
<th>PRISM Cement</th>
<th>BIRLA Corporation Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>4.38</td>
<td>10.42</td>
<td>7.69</td>
</tr>
<tr>
<td>2001-02</td>
<td>4.87</td>
<td>11.15</td>
<td>5.45</td>
</tr>
<tr>
<td>2002-03</td>
<td>5.69</td>
<td>9.33</td>
<td>3.41</td>
</tr>
<tr>
<td>2003-04</td>
<td>5.39</td>
<td>7.55</td>
<td>3.26</td>
</tr>
<tr>
<td>2004-05</td>
<td>4.80</td>
<td>7.25</td>
<td>2.62</td>
</tr>
<tr>
<td>2005-06</td>
<td>5.18</td>
<td>5.36</td>
<td>2.81</td>
</tr>
<tr>
<td>2006-07</td>
<td>4.44</td>
<td>4.15</td>
<td>2.54</td>
</tr>
</tbody>
</table>

Source: Report of Stock Holding Corporation of India Ltd.
Source: Annual report of concerning cement companies.
According to analysis of Table No. 5.8 we can say that in all studying cement companies the ratio of depreciation to net sales is very satisfying. In 2000-01 in ACC Ltd. depreciation to net sales ratio was 4.38% after one year this ratio was some climb by 5.69%, but the end of 2006-07 this ratio down to 4.44%. In Prism Cement depreciation to net sales ratio was high than ACC Ltd. & Birla Corp. (10.42%) and increase in next year, but after this ratio was down every year, till end of 2006-07 this ratio was 4.15%. In Birla Corp. 2000-01 the depreciation to net sales was 7.69%, after this depreciation to sales ratio normally down every year and reached depreciation 2.53% of net sales. So on the basis of above analysis we can clearly say all selected Cement companies depreciation to net sales ratio is fall every year. It is good indication of better management of capital, sales & manpower of Cement Industry.