

Computation of Depreciation on Extra Shift Workings

The following is the opinion given by the Expert Advisory Committee of the Institute in response to a query sent by a member. This is being published for the information of readers.

A. Facts of the Case

1. A company is a joint venture company of three public sector enterprises and is engaged in transportation of petroleum products through underground pipeline. The company was incorporated as limited company on 31st July, 1998.
2. The company is following depreciation policy of its fixed assets on Straight Line Method (SLM) at applicable rates as prescribed in Schedule XIV to the Companies Act, 1956. The company is charging average rate of depreciation on plant & machinery and main pipeline considering single shift @ 4.75%, double shift @ 7.42% and triple shift @10.34% as per the rates specified in Schedule XIV to the Companies Act, 1956. Zero depreciation was considered for shutdown period as no rate has been specified for shutdown period in Schedule XIV to the Companies Act, 1956. The methodology has been followed consistently since commissioning from the financial year 2003-04 onwards.
3. During the supplementary audit conducted by the Comptroller and Auditor General of India (C&AG) for the financial year 2009-10, the methodology of calculation of extra shift depreciation on plant & machinery and main pipeline by the company, viz., ₹42.45 crore was commented upon as follows:
4. Audit Committee and Board of the company advised that the present depreciation policy be reviewed keeping in view the comments made by C & AG.
5. The company had reviewed the calculation of extra shift depreciation based on the comments of C&AG and has also referred to an earlier opinion of the Expert Advisory Committee of the Institute of Chartered Accountants of India (ICAI) on the similar subject (published as Query No. 1.26 of Volume XIII of the Compendium of Opinions). As per the querist, the opinion on Clause 6 of Notes to the Schedule XIV to the Companies Act, 1956 provides that the average depreciation on shift working of plant & machinery is to be calculated on normal working days in a year. While calculating number of normal working days during the year, the idle days on account of maintenance etc. for which the factory/ concern have worked should be included even though the individual machine/ labourers in the factory/ concern might not have actually worked during these days.
6. Based on above, the average rate of depreciation for the financial year 2009-10 was worked out as follows as against the average rate of 8.547% as advised by the C&AG and average rate of 7.381% as considered by the company:

Shift	No. of Days	Average No. of days	Rate of Depreciation as per SLM	Average Rate of Depreciation
Shut Down	36	36/365	4.75	0.468.
Single Shift	77	77 / 365	4.75	1.002
Double Shift	95	95/ 365	7.42	1.931
Triple Shift	157	157/365	10.34	4.448
Total	365			7.849

"The above is understated by ₹6 crore due to the following:

- (i) According to para 6 of the Schedule XIV of the Companies Act, 1956, the extra shift depreciation (double/triple shift) was to be computed in the proportion for which the Company worked for double shift or triple shift bears to the actual number of working days or 240 days whichever is higher. However, the Company had worked out depreciation based on 365 working days instead of actual number of 329 working days during the year 2009-10 thus, the Company applied the average rate of depreciation of 7.381 percent against required 8.547 percent during the year 2009-10.
- (ii) The Company while computing the average rate of Depreciation as above has also not considered any depreciation for 36 days on which the plant remained closed.

The above have resulted in understatement of depreciation for the year and overstatement of net block of fixed assets by ₹6 crore."

7. The calculation was forwarded to C&AG for their concurrence to enable us to adopt the above depreciation policy on main pipeline and plant & machinery from the financial year 2010-11. However, C&AG advised that the earlier opinion of the Expert Advisory Committee of the ICAI forwarded by the company relates to iron and steel industry. As there are different plant units in the integrated steel plants referred to in the opinion, the comparison may not be relevant and the company should follow the depreciation policy as per note no. 6 (b) to Schedule XIV to the Companies Act, 1956. The company may

seek the opinion of the Expert Advisory Committee of the ICAI in this specific case.

- In view of the above, the querist has sought the opinion of the EAC on calculation of average depreciation on plant & machinery and main pipeline as per the two methods illustrated as follows:

Method - I

Shift	No. of Days	Average No. of days	Rate of Depreciation as per SLM	Average Rate of Depreciation (%)
Shut Down	36	36 / 365	4.75	0.468
Single Shift	77	77/365	4.75	1.002
Double Shift	95	95/365	7.42	1.931
Triple Shift	157	157/365	10.34	4.448
Total	365			7.849

Method – II

Shift	No. of Days	Average No. of days	Rate of Depreciation as per SLM	Average rate of Depreciation (%)
Shut Down	36	36/365	4.75	0.468
Single Shift	77	77/365	4.75	1.002
Double Shift	95	95/329	7.42	2.143
Triple Shift	157	157/329	10.34	4.934
Total	365			8.547

B. Query

- The querist has sought the opinion of the Expert Advisory Committee on the adoption of the method of depreciation on extra shift working from among the two methods to comply with the minimum depreciation as per Schedule XIV to the Companies Act, 1956.

C. Points considered by the Committee

- The Committee notes that the basic issue raised in the query relates to extra shift depreciation on plant and machinery and main pipeline for various shifts worked. The Committee has, therefore, considered only this issue and has not examined any other issue arising from the Facts of the Case.
- The Committee notes the definition of the term 'Depreciation' as provided in paragraph 3.1 of Accounting Standard (AS) 6, 'Depreciation Accounting',

notified under the Companies (Accounting Standards) Rules, 2006, which provides as follows:

“3.1 Depreciation is a measure of the wearing out, consumption or other loss of value of a depreciable asset arising from use, effluxion of time or obsolescence through technology and market changes. Depreciation is allocated so as to charge a fair proportion of the depreciable amount in each accounting period during the expected useful life of the asset. Depreciation includes amortisation of assets whose useful life is predetermined.”

The Committee notes from the above that depreciation arises due to several factors including effluxion of time and wear and tear due to use. Accordingly, depreciation occurs with the passage of time, even if concerned asset is not in use. The Committee notes that Schedule XIV to the Companies Act, 1956 specifies separate rates of depreciation in respect of single shift, double shift and triple shift.

- As regards depreciation to be charged in respect of extra shift working, the Committee further notes that Schedule XIV to the Companies Act, 1956, lays down higher rates of depreciation for certain items of plant and machinery in case these are worked for extra shifts. The Committee also notes clauses 4 and 6 of Notes to Schedule XIV to the Companies Act, 1956, which provide as follows:

“4. Where, during any financial year, any addition has been made to any asset, or where any asset has been sold, discarded, demolished or destroyed, the depreciation on such assets shall be calculated on a pro rata basis from the date of such addition or, as the case may be, upto the date on which such asset has been sold, discarded, demolished or destroyed.”

“6. The calculations of the **extra depreciation** for double shift working and for triple shift working shall be made separately in the proportion which the number of days for which the concern worked double shift or triple shift, as the case may be, bears to the normal number of working days during the year. For this purpose, the normal number of working days during the year shall be deemed to be –

- in the case of a seasonal factory or concern, the number of days on which the factory or concern actually worked during the year or 180 days, whichever is greater;
- in any other case, the number of days on which the factory or concern actually worked during the year or 240 days, whichever is greater.”(Emphasis supplied by the Committee)

The Committee is of the view that physical wear and tear of a depreciable asset, which is operated for more than a shift, is generally higher than the one, which is used on a single shift basis. Accordingly, Schedule XIV to the Companies Act, 1956, prescribes higher rates of depreciation for the assets operating for extra shifts. Further, it prescribes methodology to compute 'extra depreciation' for the assets operating for extra shifts. The Committee is further of the view that the rates of depreciation specified in respect of single shift have been determined based on two factors – effluxion of time and wear and tear. However, in case of double shift and triple shift, the factor of effluxion of time remains constant. Therefore, rates for extra shifts include only the incremental/extra depreciation due to extra wear and tear. Thus, the Committee is of the view that single shift depreciation rate should be applied for the time period when the asset is held by the company irrespective of the fact whether such asset is in use or not. As regards 'extra depreciation' to be computed for items of plant and machinery operating for extra shifts, the incremental depreciation should be determined by applying the differential rate of depreciation, i.e., depreciation rate as specified for the relevant shift less the rate specified for the single shift in the proportion which the company worked for the double/triple shift bears to the number the number of days on which the factory or 'concern' actually worked during the year. The formula for arriving at the 'depreciation' shall be as under:

$$\begin{aligned} & \text{Depreciation for single shift working} \\ & + \\ & (\text{Depreciation for double/triple shift working} - \\ & \text{Depreciation for single shift working}) \times (\text{Number of} \\ & \text{days worked double or triple shift} / \text{Normal working} \\ & \text{days during the year}) \end{aligned}$$

13. The Committee further notes that clause 6 of Schedule XIV to the Companies Act, 1956 requires that, for 'extra depreciation', normal number of working days would be the number of days on which the factory or 'concern' actually worked during the year. Thus, it is not the working days of individual plant and machinery item, which should be considered for the purpose of computing extra shift depreciation rather it is the working days of the factory or 'concern'. In this regard, it may be mentioned that various units/departments/mills/factories should be taken as separate concerns. Accordingly, the Committee is of the view that 'normal number of working days' should be calculated after deducting shut down period of the factory or 'concern'. In view the above, for the convenience of the querist, the Committee has also provided the calculations of depreciation for the concerned plant and machinery in the extant case as Annexure I.

D. Opinion

14. On the basis of the above, the Committee is of the opinion that the company should calculate depreciation as per principles laid down in paragraphs 12 and 13 above. For calculations, refer Annexure I.

Annexure I

It may be noted that the extant case indicates two situations – first, when the factory/concern was actually working for the whole year, whereas, the individual plant and machinery was shut down for a period of 36 days and the other, when both the factory/concern as well as plant and machinery were shut down for the period of 36 days.

Situation I: When the factory/concern was actually working for 365 days, whereas, the individual plant and machinery was shut down for a period of 36 days.

$$\begin{aligned} \text{Depreciation for the} & 4.75 + (7.42 - 4.75) \times 95/365 + \\ \text{concerned plant and} & = (10.34 - 4.75) \times 157/365 \\ \text{machinery (\%)} & \\ & = 7.849\% \end{aligned}$$

Situation II: When both the factory/concern as well as plant and machinery were shut down for a period of 36 days.

$$\begin{aligned} \text{Depreciation for the} & 4.75 + (7.42 - 4.75) \times 95/329 + \\ \text{concerned plant and} & = (10.34 - 4.75) \times 157/329 \\ \text{machinery (\%)} & \\ & = 8.189\% \end{aligned}$$

1	The Opinion is only that of the Expert Advisory Committee and does not necessarily represent the Opinion of the Council of the Institute
2	The Opinion is based on the facts supplied and in the specific circumstances of the querist. The Committee finalised the Opinion on 10.10.2011. The Opinion must, therefore, be read in the light of any amendments and/or other developments subsequent to the issuance of Opinion by the Committee.
3	The Compendium of Opinions containing the Opinions of Expert Advisory Committee has been published in twenty nine volumes. A CD of Compendium of Opinions containing twenty nine volumes has also been released by the Committee. These are available for sale at the Institute's office at New Delhi and its regional council offices at Mumbai, Chennai, Kolkata and Kanpur
4	Recent opinions of the Committee are available on the website of the Institute under the head 'Resources'.
5	Opinions can be obtained from EAC as per its Advisory Service Rules which are available on the website of the ICAI, under the head 'Resources'. For further information, write to eac@icai.org .