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5.3 Sinking Fund Method



DEPRECIATION

Engr. Feb June R. Gogola

Immersive Reader

Intended Learning Outcomes

At the end of the lesson, the student shall be able to:

- 1. Describe how the sinking fund method works as a depreciation method.
- 2. Apply the formulas/equations in a sinking fund method to solve word problems.

SINKING FUND METHOD

In this method, it is assumed that a sinking fund is established in which funds will accumulate for replacement purposes and will bear interest. The total depreciation which has occurred up to any given time is assumed to equal the amount in the sinking fund at that time.

Useful Equations/Formulas

$$d = \left(C_O - C_L
ight)\left[rac{i}{\left(1+i
ight)^L - 1}
ight]$$

$$D_n = (C_O - C_L) \left[rac{(1+i)^n - 1}{(1+i)^L - 1}
ight]$$

$$C_n = C_O - D_n$$

where:

 $d \longrightarrow annual\ depreciation\ cost$

 $C_O \longrightarrow original \ or \ first \ cost$

 $C_L \longrightarrow book \ value \ at \ the \ end \ of \ life \ of \ the \ property$

 $\longrightarrow salvage\ or\ scrap\ value$

 $L \longrightarrow useful\ life\ of\ the\ property\ in\ years$

 $D_n \longrightarrow total depreciation up to "n" years$

 $C_n \longrightarrow book \ value \ at \ the \ end \ of \ " \ n " \ years$

 $i \longrightarrow interest\ rate\ per\ period$

Reference: Engineering Economics by Hipolito Sta. Maria



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