Al-Mustaqbal University College
Chem. Eng. Petroleum Industries Dept.

Chemical Engineering Economics
4th Stage

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Lecture 7 part2

The Declining Balance method

It is a method that are used to write off the initial cost rate in the early years of the useful life, than the later years. Therefore, it overcomes one of the deficiencies of the straight line method. In the declining or *diminishing balance* method, also known as the *Matheson Formula* or *Constant Percentage* method, a fixed percentage of the book value of an asset is written off annually.

It is possible to calculate the declining balance percentage of depreciation;

$$f = 1 - (\frac{V_s}{V})^{\frac{1}{n}}$$

Example

The primary cost of a certain equipment is 22000$ with its installation until it is on service. The salvage value at the end of 10 years as considered its service life is estimated 2000$. calculate the book value after 5 years using the declining balance method.

$$f = 1 - (\frac{2000_s}{22000})^{\frac{1}{10}}$$

f= 0.2131

the value the equipment after 5 years =

$V_s = V(1-f)^5$

$$= 22000(1-0.2131)^5 = 6650 \text{ \$}$$