

Accidents 2

- Estimation of accidents costs
- Accidents are expensive.
- Safety and health professionals must prove that accidents are more expensive than prevention, that is by an estimation way.

- Workplace accidents fall into:
 - 1-Lost work hours
 - 2-Medical cost
 - 3-Insurance administration
 - 4-Property damage
 - 5-Fire losses
 - 6-Indirect cost

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- **Cost Estimation Method**
- Developed by professor Simonds.
- In order to have a value, a cost estimate must relate directly to the specific company in question.
- Applying broad industry cost factor will not do.
- Cost associated with accident divided into insured and Uninsured cost.
- Insured is simple of examining accounting records.

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Based on Simonds accidents can be divided into:

- **Class 1 accidents:** lost workdays, permanent or partial disabilities, and temporary total disabilities.
- **Class 2 accidents:** Treatment by a physician outside the company's facility.
- **Class 3 accidents:** Locally provided first aid, property damage of less than \$100, or the loss of fewer than 8 hours or more to be lost.

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- **Class 4 accidents:** Injuries that are so minor result in property damage of \$100 or cause 8 hours or more to be lost.
- Average uninsured costs for each class of accident can be determined by sorting record according to the class.
- Record every cost that was NOT covered by insurance.

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- **Direct Cost Calculation associated with work hour**
- Compile the total number of lost hours.
- Multiply the hours times the applicable loaded labor rate
- (labor loaded rate= employee's hourly rate + benefits)
- Benefits vary from company to another 20-35%

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- Employee hour lost X average loaded labor rate=386 X \$15=\$5790.00
- Company lost 386 hours unproductive due to the accidents cost \$5790.00
- This figure (5790.00) is increased by standard % to cover indirect cost to determine the total cost widely used 20%.

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- **Estimating Hidden Costs:**
- Safety professionals often use the iceberg analogy when talking about the real costs of accidents.
- Accidents costs are like an iceberg in that their greatest portion is hidden from view.
- In the case of the icebergs, the larger part of the iceberg is hidden beneath the surface of water.

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- In the case of an accidents, the larger part of the actual cost is also hidden beneath the surface.
- Many different models are used for estimating both direct and indirect cost of accidents.
- Some of the models are so complex that their usefulness is questionable.
- Checklist is a simple and straight forward tool that can be used to estimate the hidden costs of an accidents.

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- **Question:**

- A company working in oil production, has lost 386 hours unproductive in the year 2000. If the average hourly rate was 10.7, and the benefits was 25%. Calculate the total cost of accident.

Answer

- Total cost of accident for specific period=
(Direct + Indirect) cost
- Direct cost = employee hours lost (4th qt.) * Average loaded labor rate
- Average loaded labor rate = employee's hourly rate + Benefits
- Benefits = 20-35% of hourly wages
- Company lost hours due to accidents in the fourth quarter = 386 hours

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- Average hourly wage = 10.78
- Benefits = 25% = $25/100 * 10.78 = \underline{\underline{2.7}}$
- Average loaded labor rate = $10.78 + 2.7 = \underline{\underline{\$13.48}}$
- Direct cost = $386 * 13.48 = \underline{\underline{\$5,203.28}}$
- Indirect cost = $20/100 * 5,203 = \underline{\underline{\$1,040}}$
- Total costs = $5,203 + 1,040 = \underline{\underline{\$6,243}}$

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- Safety Problems
- Q:(1)
- A company working in an oil and soap production has four accidents in the year 2009. The first one was in January and it was a loss of 6 hours, temporary total disabilities of \$120, and first aid of \$80. The second was on March and it cost treatment by the physician of \$50. The third was in June and it cost permanent partial disabilities of \$100, and property damage of \$120. The last one was in December and it cost two lost workdays, with the help of the table calculate the average cost per accident. (1Hr = \$15)

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- Solution
- Total = $700+50+170+120 = \$\underline{\underline{1040}}$
- Average = $1040/4 = \$\underline{\underline{260}}$
- One day = 16 (8+8)
- Two lost days = $2*16 = \underline{\underline{32}}$