

Nemi Auto Body and Paint Incident

Nemi is a small auto body and paint facility specializing in Vintage and classic cars. With a team of six workers this facility enjoys an annual sales of \$2,500,000 and a reputation for delivering quality custom body/paint jobs. The average profit margin for this industry is about 25% but because of the additional attention that Nemi pays to quality and craftsmanship, their profit margin is 12%. To ensure high quality, for example, Nemi removes the cab from Chassis in the pre-paint body prep work and uses three coats of paint over six weeks. After each coat of paint, cabs are transferred to a semi-vacuumed drying room using a lift truck.

On April 15, 2015 while carrying an original collectible Fords cab, the right fork of the lift truck dropped bringing the cab in contact with the shop floor which allowed the cab to slide off of the lift truck and bumping into airing an active paint transfer hose. The sparks generated through the cab contacting the shop floor ignited the paint resulting in an explosion that resulted in:

- 1) Fire in north western corner of the shop
- 2) An explosion that spilled a small inventory of paint in the paint kitchen
- 3) Serious (but non-life-threatening) injury to a worker

This incident brought police and fire department to the shop and the floor manager stopped the shop operation for a formal investigation. The result of investigation suggested that a secondary safety pin in the lift truck would have prevented the fork drop and routing the active paint hose through an in-ground canal would have prevented the the cab-hose contact and hence the explosion. An engineer estimated the total costs of implementing such remedies to be about \$3,000. The total costs of spilled paint and other inventory losses is estimated at \$5,000, but the cost of repairing and restoring the damaged vintage cab is estimated to be \$60,000.

This incident has alarmed the management of Nemi Auto Body and Paint. On the one hand they are interested in preventing similar incidents in the future and on the other they are not sure if investing in preventative safety aligns with their business interests. The management has come to you for consultation. With the knowledge you have acquired through this course and in the light of the above information please use the 5-I Cost Calculator numbers to conduct a business analysis of this incident and make recommendations. In your analysis please provide:

- 1) Total Costs of damage
- 2) Total cost of Prevention
- 3) A cost/benefit analysis
- 4) Outline of business implications of this incident

An engineering inspection of the facility and its operation points to five additional areas that need an upgrade to control other hazards in the shop. The costs and effects of these engineering upgrades are estimated to be 20% more than the aforementioned preventative remedies. Using the 5-I costs, please explain if and why you would recommend these additional upgrades.