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# ***Background of the HYATT REGENCY DISASTER:***

Hyatt Regency hotel was first to open in 1980, construction started back in 1978. The building was a model of the time and in know into the public due to its design. After the opening year, almost 1600 people gathered in the lobby for a dance competition. The walkway has a good eyesight view, almost 40 people gather on the second floor and 20 on the fourth floor. The walkway did not take the weight and fourth-floor walkway fall on second and second the lobby, which killed 111 people on the spot and more than 216 people got injured.

# ***Root cause analysis in the content folder:***

Root cause analysis is the first investigation which started right after the collapse, root cause investigates and present the first report, according to the investigation the collapse occurs due to of the negligence of the Engineer and their calculation as well as the misunderstanding of communication of by not following the protocol which is mentioned into the project details. There is another fact that the longitudinal weld was not that strong as it is supposed to be. 1600 people gathered on that day to see the dance competition, there was also a lot of burden on the walkway as 20 people were on the fourth tier and almost 40 were on the second tier, which put a lot of pressure on the walkway. The designed of the walkway is changed without the permission of the structural engineers, drawings provided is considered to be a final design and constructed according to the design, as it was cheaper and easier. But in fact, these designs are required changes. Hanger rod is replaced with one to two which is also contributed towards the weight and which cause the reason for the collapse. The best thing in this analysis is to find the issue but the worse thing is the identification of reason after the loss of more than hundred people with more than $140M financial loss of the company owners.

***Elimination of three root causes by correctly implemented design review:***

## **More people than usual on the walkways**

On the day there were more people than the usual traffic, the walkway was busy as people were watching the dance show. This is also one of the failures of the engineer as they should know when they are going to provide the facility of a walkway over the lobby, the walkway must be strong enough to bear the weight of the people. The longitude weld was not strong enough to take that weight of the people.

correctly implemented design can reduce the risk attached with the construction of building as once the design is tested and calculation is properly performed with respect to the weight as well, then it should allow for the construction, in case there are any changes required must be properly communicated to the structural engineer.

## **Organizational Goal**

It was not the hotel business plan the death of the people, but human negligence comes in between the success of the hotel and the lives of the visitors on that day. Hotel first goal and responsibility is to satisfy customers with their prestigious services. These death and injuries happen due to the inability to follow the safety goal. The organization must have health and safety priorities as people came to hotels for the quality time, not for death or injuries.

correctly implemented design which follows all safety rules will never lead to deaths or injuries. Root cause analysis identifies the issue for the future lesson of the engineers, If safety encounter during the construction such as longitudinal weld is strong enough and the structural changes are considered before the construction, there might be chances that death and injuries never happened.

## **Significant changes**

Significant changes consider during the construction, the original design was not required and it needs to change, nonstandard parts are required but fabricated engineer prefers standard parts which were cheaper and easier to install due to these huge changes lot of load capacity decrease and which assist the collapse.

The design needs to be implemented correctly due to of the changes required and suggested by the structural engineer, the building was a model of the time but luckily it was not up to date of the structural changes which led to the disaster, it was the on of biggest collapse before 9/11.

# ***Project management process***

Regency Hotel is one the best service provider and they have the best capabilities to manage the risk associated with the success of the hotel, the question arises here how the hotel is dogged to consider the various changes. Management of the business was failed to consider the changes need to adopt on the time of construction.

Project management is a proper process which involves the planning, execution, controlling and closing of the work. In Regency case, the project was planned properly but did not communicate properly to all members. On the other hand during the execution of the project, it was not followed as it is prescribed changes after the initial proposal by the structural engineer. There was no proper control was in place for the execution of the project due to that the failure of the project appears. And at the end it is close but unfortunately, no proper guidelines about the changes are provided like new calculation and their impact on their future outcomes.

# ***Conclusion***

Root cause analysis reviles the importance of errors and safety requirement which never be compromise during the work process, they can reduce to an acceptable level of risk. Root cause analysis is the best technique to find out any kind of disaster on the very initial level.

# ***References***

Lawson, J. W., & Brady, P. A. (2011). Using the Hyatt Regency Skywalk Collapse Case Study in Engineering Education. In 42nd Structures Congress Conference Proceedings: Las Vegas, Nevada.

Lopez, R., Love, P. E., Edwards, D. J., & Davis, P. R. (2010). Design error classification, causation, and prevention in construction engineering. Journal of performance of constructed facilities, 24(4), 399-408.

Marshall, R. D., Pfrang, E. O., Leyendecker, E. V., Woodward, K. A., Reed, R. P., Kasen, M. B., & Shives, T. R. (1982). Investigation of the Kansas City Hyatt Regency Walkways Collapse.(NBS BSS 143) (No. Building Science Series-143).

Pfrang, E. O., & Marshall, R. (1982). Collapse of the Kansas City Hyatt Regency Walkways. Civil Engineering—ASCE, 52(7), 65-69.

Moncarz, P. D., & Taylor, R. K. (2000). Engineering process failure—Hyatt walkway collapse. Journal of performance of constructed facilities, 14(2), 46-50.

Hauck, G. F. (1983). Hyatt-Regency walkway collapse: Design alternates. Journal of structural engineering, 109(5), 1226-1234.