

## Walkie Scorchie Skyscraper

Walkie Scorchie is a 37 storey building which was originally named as Walkie-Talkie due to its shape resembling a handheld walkie-talkie. Later the reporters have named it Walkie – Scorchie building **due to its construction which led to high beam rays falling on the street leading to scorching cars**, melting plastic bottles and even frying eggs.

The concave glass structured windows are the reason found behind the dead rays. Due to the concave mirror effect, the sunlight falling on the windows gets concentrated leading to high heat rays of upto 72 degree celcius.

## System Engineering Aspects Not followed Correctly

The following are few of the aspects of System Engineering which were not considered during the design and construction of the building:

1. Requirements Attributes i.e. **Rationale** not captured or not analysed properly. As the engineers have mentioned that the ctual design catered for fins on the windows to reduce the reflectivity and later on to optimize on the cost the fins were dropped. If proper rationale would have been provided in the beginning, the effect of this cause might be known much ahead.
2. Analysis on the building design lacked, if the requirement would have been analysed properly the requirement of fins would have been understood.
3. The system engineering deals with overall life cycle cost benefits. In this case, initially the cost was reduced by not placing fins, but later on it costed more for solving dead rays problem. Thus in SE, we need to see the overall life cycle benefit rather than focusing on one stage.
4. **Prototyping** of the design was not carried out. In case, if prototyping would have been done the effect of high temperature rays might be identified before-hand.
5. During the requirement capture the **external factors** i.e. climate conditions, terrains etc. is to be considered. In this case, the climate condition were assumed and design was modified considering that.
6. The DT&E is required to be done on the system under development to rule out any future issues. In this case, the DT&E might not have been conducted precisely.
7. Requirement traceability was not managed as there was a requirement for fins mentioned but later at the design phase it was removed without any further analysis being carried out on that.