

pipe (AL-PPR) or PB pipe (polybutylene pipe). The above pipeline concealed along the wall and the ground will be connected with water point indoor.



Fig. (5). Program 2nd about renderings and the framework harmed in balcony of tall building.



Fig. (6). Program 3rd about renderings and the framework harmed in balcony of tall building.

2.2.2. Advantages and Disadvantages of this Design are as Follows

1. Framework is as part of the building, completely merged with building, not only unlike other combination as easy to form pollution of visual form, but is the modeling greatly improved.
2. The installation of water heater is taken into account in design stage. Not only to achieve its harmonies to functionality and architectural style, but also to reduce some investments, and reduce unnecessary waste and disturbance to other residents.
3. The connection distance of collector and tank is closer, heat loss is less. They are very convenient to installation, maintenance, construction, and maintenance, and with high security.
4. It is responsible for the user themselves for the application, management, maintenance of the framework in balcony, and it has no interruption with the other users.
5. The framework in balcony has a certain impact on for users with smaller balcony, when building distance is not enough, users in low-storey is affected largely due to sunlight.

CONCLUSION

By analyzing the design scheme above, it is known that by careful planning in early process of the design, while taking into account the factors about engineering characteristics, climatic conditions and field conditions and so on, the integration of solar water heaters and building can be achieved very well, so as to achieve solar energy is fully used, at the same time, without building's appearance damaged, even a decorative role is played.

Due to the climate conditions in the north area, current it is suitable for roof bracket and balcony framework. Two ways have their own advantages and disadvantages, if fully taken into account in design, while their advantages can be better played. On the whole, balcony framework can be applied in multi-storey building, lower tall building and tall buildings, roof bracket is more suitable for lower tall building with flat roofs, there are also mosaic solar water heaters in roof applied in multi-storey building, lower tall building with slope roof [4]. To speak, this is the best way about the integral combination of solar water heater and building. It will become the future direction of development of the solar water heater applications.

The integral combination of solar water heater and building belongs to major innovations in solar energy technology, which has given rise to high priority by government sectors and technologies, industry sectors, and will make solar energy technology of 21st century up to a new level, and allow the architecture of 21st century become green ecological solar architecture.

CONFLICT OF INTEREST

The author confirms that this article content has no conflict of interest.

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