Mid-city hotel gets proactive with energy savings by using Dual Reflective film

Project Task

During the renovation and refurbishment of the Holiday Inn in central Perth, engineers took the time to address long-standing comfort issues experienced in the north facing rooms and high energy consumption from the ageing HVAC system.

With a new HVAC system in place and wanting to capitalise on the hotel still being closed for refurbishment, the engineers sought to further reduce running costs by tackling the solar heat gain issue head-on. The hotel team approached local window film specialists ClearGard who had the answer.

Solution

ClearGard worked with hotel staff to analyze the problems, in order to tailor the best solution. Overheating was the prime issue, but glare was causing guests to keep curtains drawn, losing the urban views. In addition, sun exposure was causing the soft furnishings to fade. ClearGard suggested installing OptiTune 15, a highly effective dual-reflective film, which would deliver a 76% reduction in solar energy, and cut glare by 85%. With a 99% UV block, the film ticked all the boxes. And when Hanita’s energy modeling forecast savings of over 24,000 kWh a year on cooling costs, the Holiday Inn management was convinced.

Outcome

Hanita energy efficiency team actually logged temperatures of two adjacent rooms, one with OptiTune on the windows, and the second without film, and also placed a sensor on the roof to measure external temperatures. Results for the room with film showed interior temperatures reduced by around 10 degrees, reaching levels that the AC could cope with efficiently. Thanks to these energy savings, the payback period would take less than a year. But most importantly, curtains would remain open, and guests could fully enjoy their stay.
Testimonial

We had issues with heat build-up on the North facing rooms of the Holiday Inn City Centre located in the Perth CBD. We were also very concerned about the excess load on our HVAC system and cooling expenses, hotel guest comfort, excessive glare, and long term UV damage on furniture and window coverings which need to be replaced periodically. After viewing a webex presentation from Hanita Coatings on solar control window film, I approached them to find a possible solution.

Charles from Cleargard Australia installed heat loggers in two adjacent rooms (one with window film and the other without) that logged room temperatures for one week over a very hot week without any HVAC assistance. The results were quite impressive with temperature differences in excess of 10 degrees Centigrade. Cleargard and Hanita prepared an energy savings report, quotation, and an extraordinary short payback period. I presented this to the board of owners and a decision to film all 56 rooms was made very quickly.

The installation ran very smoothly with minimal disturbance and was completed within one week. In fact, you can even feel a significant reduction in the amount of heat and sunlight that now passes through the windows.

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