

THE SQUARE - (Second chapter of Travel write-up by Danny Gil for his school friends)

Fortunately, breakfast at the 5-star Western Hotel is western, and their free Continental breakfast wasn't just bread and coffee. It had everything. Those who had starved last night could make up by gorging on ham, eggs, bacon, cheese, etc. And for the vegetarians, there was oatmeal, bread, fruit and all the rest of the western style breakfast fare, plus, if you wanted, noodles and dumpling.

At 9:00 am, all of us were ready. But it was work first before pleasure. Our first stop would be a visit to a Broad chiller installation.

And the closest was the hotel's basement. We wended our way past the kitchen, down the stairs, into the machine room, where we beheld, for the first time, two huge 500-ton absorption chillers. A ton is not a unit of weigh, but a unit of cooling capacity - equal to the coolness given off when a ton of ice melts over 24 hours. For comparison, a small window type unit is about half a ton, or 6000 btuh as you might see on the nameplate. Typically, a window type unit of 8000 btuh would cool a bedroom. Well then, 1000 tons would cool about 750 rooms. The hotel does not have that number of rooms; most probably, the second chiller is just for backup capacity, which is the norm.

But the most amazing thing was that unlike electric chillers - where huge motors spin mechanical compressors to pump refrigerant in a closed loop and in the process create a racket of sound - these chillers were very quiet. Their cooling process is chemical, and their refrigerant (unlike the ozone depleting Freon of electric chillers) is plain water. Air conditioning equipment is nothing but a heat pump; heat from within the building is drawn off (thus the space gets colder) and pumped to the outside and rejected; via a cooling tower on the roof, or in the smallest extreme, via the warm blast of air at the outside end of a window type unit. For conventional air conditioning, electricity is the energy source. But for absorption chillers, heat is the energy source. So they can use waste heat from an electrical generator, or heat from a fuel-fired boiler designed for winter heating, but idled in summer. In fact, directly fired absorption chillers also are boilers that can be run in winter for heating. No need for separate boilers in this machine room.

We snapped pictures, saw the controls room and pump room, and in about half an hour, it was obvious that the group felt they had done their work for the day and wanted to go on for the sightseeing. Our guide, the young pretty girl, named Violet, is also a part time model. She was wearing a bright red pair of pants, which turned out to be really helpful among the crowds at Tienanmen Square. It took the bus about half an hour to get there, and we were impressed and amazed.

Think of twenty or thirty football fields (I am just guessing, don't know the actual conversion) of wide, cobble-stoned expanse. At one end is a looming palace, which is one of many other structures to traverse (each with their respective open square) before you get to the final one, where the emperor once sat and received his subjects back in the 1400's. At one point, the palaces become the Forbidden City. We walked, and walked,

and walked, amid the throngs of people, locals and foreigners. Waded through vendors galore, and sprinkling of maimed beggars. And there was the ever presence of smartly dressed guards in green, without firearms. Here, I felt much safer than when I was in Rome.



Tienanmen Square with part of the group walking toward the palace in the background. Violet, our guide in red pants, is on the left.

It was at the third or fourth palace that Violet got tickets for all of us to enter the Forbidden City, at 60 yuan , about \$8 each, expensive for local standards.



Inside the Forbidden City. That's my boss Milan centered at back. Fred, the host, is the taller one up front.

Meanwhile, the vendors were at work. They besieged us with all sorts of ware, but what seemed most common was three glossy, coffee-table type books on Beijing, The Forbidden City, and the Great Wall. Remembering Boopeep's admonition to bargain like hell, I countered with \$3 to the \$10 the vendor was asking for one book, and then she started following me in an almost harassing manner until we came to terms at \$10 for all the three books. I felt good, until later when most of the others got theirs for 60 yuan, or about \$7. Later, I found that Adam, the young guy, got the same books for \$40.

David and Steve, the two architects, kept a lively discussion on Chinese architecture, viz, how the structures were basically columnar, with curtain walls hanging for cross beams, etc, etc. Unlike the Roman structures, these were all made of wood, so all the more it was amazing how they survived all these years, even if restored a few times. What really got me was that on each and every plaque in English was an inscription "made possible by American Express". How capitalistic.

We must have passed 5 or 6 "palaces", each a trifle smaller. One of the last was for the favorite concubines of the emperor. Obviously, after his hard days work resolving government issues, he wanted them close at hand to help him relax.

A good portion of the time was spent looking for each other, all 17 of us, and we always kept in mind to just follow Red Pants, our guide. The engineering mind bores easily of repetition, and many of us started muttering about lunch and then the Great Wall. The 2 architects tended to fall back and admire the architecture.

Finally, there was the exit sign. We walked past the moat, and were in the outside world again. More vendors, more beggars. I really had wanted to give alms, but didn't have any change. My 100 yuan bills equal to about 12 bucks was too much. We walked a good distance to where the bus had parked at the closer pick-up location. I was one of the first to board it, and noticed it took some time for the others to trickle in. The last 3 soon came charging up, pursued by a raft of vendors. They had made some purchases a few blocks back, and were still trying to ward off vendors who wanted a piece of the action and/or wanted to sell more.

Lunch was at another even more exotic Chinese restaurant. So much so that one of the guys refused to eat.

To be continued.