MHI WORLD PROJECT [MEXICO]

Deliver of a thermal power plant in Mexico overcoming the crisis of H1N1 swine flu.

Sunny Mexico. Land of historical attractions, including the ancient remains of Mayans and Aztec civilizations; land of popular beach resorts such as Cancun. Mexico has a long history of interaction with Japan spanning 400 years. Facing the Mexican Pacific coast and approximately 300 km southwest from the capital, Mexico City, is the Pacifico power station in the Petacalco area of Guerrero, and it was to this very power station that a highly efficient thermal power plant with low environmental load was delivered in March 2010. Members of the Mexico Pacifico Project Group shared their thoughts on this project, which has already started commercial operation.

New Pacifico power station fronts six power stations that also feature MHI products, together accounting for 43% of the thermal power generation capacity in Mexico.

Q. Could you give a brief explanation of the project?

A. We delivered the thermal power plant to the Pacifico power station of the Comisión Federal de Electricidad. It is Central and South America's first supercritical-pressure coal-fired power plant, and it boasts an output of 700,000 kW, the largest in Mexico. Behind its introduction was the power situation in Mexico, which sought both fuel diversification to counter petroleum bias and efficient power plants.

Q. What kind of features does this power plant have?

A. A big feature is the plant's high generation efficiency that it still gives consideration to the environment. Thermal power generation involves sending steam generated in a boiler to a turbine, which makes a power generator rotate, producing electricity. Put simply, it is like boiling hot water in a kettle, and using the steam that comes out to turn a pinwheel. In general, the pressure produced from a boiler is around 170 atmospheres, but it is possible to go up to 240 atmospheres with this supercritical-pressure coal-fired power generation. Because the same amount of power generation is possible using less fuel, effective utilization of fossil fuels can be realized, and CO_2 emissions can be reduced, too.

Q. So it's an environmentally conscious power plant. What excited you most going into the project?

A. Over the past 50 years, we have delivered approximately 60 steam turbine units and approximately 50 boiler units to the Comisión Federal de Electricidad. There is something deeply impressive about MHI power plants maintaining a high market share in a country that locates roughly halfway around the world from Japan. So we went into the project with a strong sense of wanting to be worthy of the trust those pioneers had amassed – to manufacture a high-quality power station, and to make MHI products top of the wish list for any future projects.

Q. What comes to your mind when thinking back on the project?

A. The biggest challenge we faced was in April 2009, when the work was at its busiest. The H1N1 swine flu was becoming more severe throughout Mexico, and we had to temporarily evacuate about 100 supervisors, including 70 Japanese. There was that, and then we had to reduce the number of workers from 4,000 to 1,000. We were in a tight predicament, but after construction resumed, everybody – both Japanese and Mexican – pulled together as a team, working round the clock to have the project completed and delivered on time! We had to overcome some unexpected circumstances to accomplish what we did, so the taste of success was especially memorable.

Boiler for supercritical-pressure coal-fired power generation with high-performance dust collector, utilizing MHI Group's environmental technology to meet Mexican environmental standards.

Local staff on the hand-over day deservedly pleased for a commendable joint effort on completing the project in the face of intense unforeseen circumstances.

Mexico City, capital of Mexico, a country with approximately 5.3 times the area of Japan. Mexico has a lot of world heritage sites, both cultural and natural.