

Revolutionary solution for Ho Ping in Taiwan



Fläkt Woods supplies all the process fans and all the ventilation fans for the 1320MW power station at Ho Ping, on the northeast coast of Taiwan.

■ FACTS

Customer:

Ho Ping Power Station in Taiwan.

Need:

Low noise solutions for ventilation and industrial air movement.

Solution:

Fläkt Woods Air Handling Units and Axial fans with a new, revolutionary impeller.



New Fläkt Woods' solutions set new standards

Fläkt Woods created a range of fans using a revolutionary impeller, which has set new standards in industrial air movement by reducing noise levels, and helping to lessen industry's traditional dependence on silencers.

Years of research have culminated in Fläkt Woods developing the 3i impeller blade, made of plastic reinforced fibre. Fan noise always results from the interaction of the flow with the rotating parts: the blades, the static parts, the arms supporting the motor, and the new impeller has a dramatic improvement on noise levels.

Ho Ping Power Station

It has proved itself on a contract where Fläkt Woods supplied all the process fans and all the ventilation fans for the 1320MW coal-fired power station at Ho Ping, on the northeast coast of Taiwan.

Low noise levels

A critical specification from Alstom was that noise levels were limited to a maximum of 85 dB (A) on each walkway point within the power station.

In the main turbine hall, Fläkt Woods supplied 10 air-handling units, each incorporating 4 x 1000 mm axial flow fans, which draw air from outside, condition and introduce it into the hall. This air is then removed from the roof with 1250 mm axial fans.

Fläkt Woods thought of many ways of receiving low noise levels: changing the installation by adding silencers, inlet cones, making the fans blow downwards,



all of which were feasible, but expensive. So a prototype of the new impeller was manufactured in Lyon; and engineers from Alstom witnessed the test.

Sound levels went from 88-89 dBA down to 84 dBA, whilst keeping the same duty point, and having a higher fan efficiency.

In total 40, 3 bladed 3i impellers were installed on site by Fläkt Woods' technicians.

Result

The result was that the impellers have avoided the use of silencers. Fläkt Woods calculated that a total of 40 silencers would have been needed, (with diameters of 1000 mm and 800 mm in length) to have brought about the 4-5 dBA attenuation. It was also the simplest solution, as there was absolutely no room around the AHU's for any other installation.

Air Handling Units

The comprehensive range of Air Handling Units that we offer allows us to deliver the best individual solution for any customer. Our R&D work focuses on reducing energy consumption and creating factory complete air handling system solutions with controls.

Fläkt Woods Group

Fläkt Woods is a global company providing solutions for ventilation and air treatment for buildings as well as fan solutions for Industry and Infrastructure applications.

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