

Leadership demands state-of-the-art solutions

ISTANBUL, TURKEY: WHEN ESTABLISHED IN 1924 JUST AFTER THE REPUBLIC OF TURKEY WAS FORMED, ISBANK HOLDS THE HONOUR OF BEING THE COUNTRY'S FIRST TRULY NATIONAL BANK. TODAY, ISBANK TOPS THE LIST OF TURKEY'S MOST RESPECTED ENTERPRISES, AND IS INCLUDED AMONG THE WORLD'S LARGEST CORPORATIONS. IN 2000, THE BANK OPENED ITS NEW HEADQUARTERS IN ISTANBUL, THE COMPLEX CONSISTS OF THREE TOWERS: THE HIGHEST IS 53 STORIES HIGH AND THE TWO SMALLER TOWERS ARE 34 STORIES HIGH. IT CONTAINS THE BANK'S MAIN BRANCH OFFICE, AN 800-SEAT AUDITORIUM, AND A SHOPPING CENTRE. THE REMAINING SPACE OF THE 224,000-M3 COMPLEX SERVES AS HEADQUARTERS FOR ISBANK AND ITS HOLDING COMPANIES.

THE SITUATION

When it was decided to relocate headquarters from Ankara to Istanbul, Isbank wanted to establish a new and state-of-the-art landmark. Accordingly, the bank hired the architect firm behind Trump Towers in New York, Swanke-Hayden-Connell Architects and JB&B to develop a dynamic addition to the Istanbul skyline. In an effort to signal reliability and high quality, Isbank wanted only the best products and most intelligent skyscraper technology in the towers. Therefore, the Grundfos project team presented a complete state-of-the-art solution for the large and prestigious project.

THE GRUNDFOS SOLUTION

Pressure boosting

Lifting water 180 m straight up from the basement to the 52nd floor requires a lot from a booster system. In fact, even the

TOPIC:

State-of-the-art solution -
Unique high-rise booster system
- Customised vibration damper

LOCATION:

Istanbul, Turkey

COMPANY:

Grundfos

largest and most powerful booster system would be exposed to an extreme load and therefore vulnerable to excessive wear, causing frequent breakdowns. To avoid an enormous static pressure, the Grundfos solution recommended placing pressure booster systems in the basement, on the 5th floor, on the 23rd floor, and on the 39th floor. By doing so, the static pressure on the pumps would be reduced considerably. As a result, smaller and much more energy efficient pumps could be installed, which would reduce energy and maintenance costs significantly.

Air-conditioning

With the chiller in the basement and the cooling tower on the top of the building the air conditioning pumps would also suffer under an extremely high static pressure. Consequently, cooling tower pumps were also installed halfway up the tower, on the 23rd floor. As a result, the Grundfos solution guaranteed the right inlet pressure and prevented excessive wear due to the high static pressure on the pumps.

Although the Grundfos solution was somewhat unorthodox, the placing of powerful pumps right between office floors was also rather ingenious. To prevent vibration and noise nuisances Grundfos developed special vibration dampers, which consisted of a concrete base with built-in springs/shock absorbers. As a result, noise and vibration were virtually eliminated.

Except for the fire protection system, Grundfos supplied pumps for every application in the three towers, which also included heating and wastewater pumps.

THE OUTCOME

Everything inside as well as outside of the complex signals high quality. However, modern technology and sky-high ambitions are in fact the very core of the bank, expressed in 1924 by Mustafa Kemal about his aspirations for the foundation of a national bank.

“Paramount among measures that will liberate and augment the nation is the establishment of a bank, utterly modern and national in identity, born directly out of the people’s respect and confidence...”

The Grundfos pump systems have been in operation for more than six years now and according to the technical manager at Isbank, the Grundfos solution is exactly what they had hoped for. The pumps are performing as promised and apart from the regular service checks the pumps are virtually maintenance-free.

Related Products



NK, NKG, NKE, NKGE END-SUCTION LONG-COUPLED PUMPS

Grundfos offers a virtually limitless range of long-coupled (NK) end-suction pumps