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Getzner mitigates vibration of deep-seated foundations in heavy industrial plants

Getzner has installed its innovative anti-vibration materials in more than 15 Indian power, steel and chemical plants, providing effective mitigation of vibration of deep-seated foundations.

Power plants, with heavy industrial equipment such as gas turbines, hydro power turbines, motor-driven boiler feed pumps (MDBFP), compressors and fans (Forced Draft fan, Primary Air fan, etc), are the origin of noise and vibrations, which not only increase maintenance costs, but also affect people, buildings and equipment in the vicinity.

Explains Sanjay Risbood, CEO and Resident Director, Getzner India: "Heavy turbines or pumps can be installed on deep-seated foundations with full-surface bearings. Getzner has provided this innovative solution in more than 15 power, steel and chemical plant projects throughout the country. These include the Essar Power plants in Salaya and Mahan, the GMR Energy plant in Raipur, and the Costal Energen plant in Tuticorin."

Significant cost reduction

Austria-headquartered Getzner is a world technology leader in the field of vibration protection. Its in-house developed Sylomer® and Sylodyn® have superior vibration

mitigation characteristics. Risbood informs that installation is easy and quick, as no special equipment or staff training is required, and the concrete can be poured directly on the Sylomer or Sylodyn isolation layer.

"In deep-seated foundations, the isolation layer is usually provided as a full-surface bearing. The system can be designed for in-situ concrete construction and for construction with pre-fabricated elements. The elastic layer does not need any maintenance. The slab design is simple and cost effective. All of this leads to significant cost reduction for deep-seated foundations," he says.

Steigs Power Plant case study

The Steigs Power Plant in Mels, Switzerland, is a good example for efficient vibration isolation. During the construction of the new underground hydroelectric



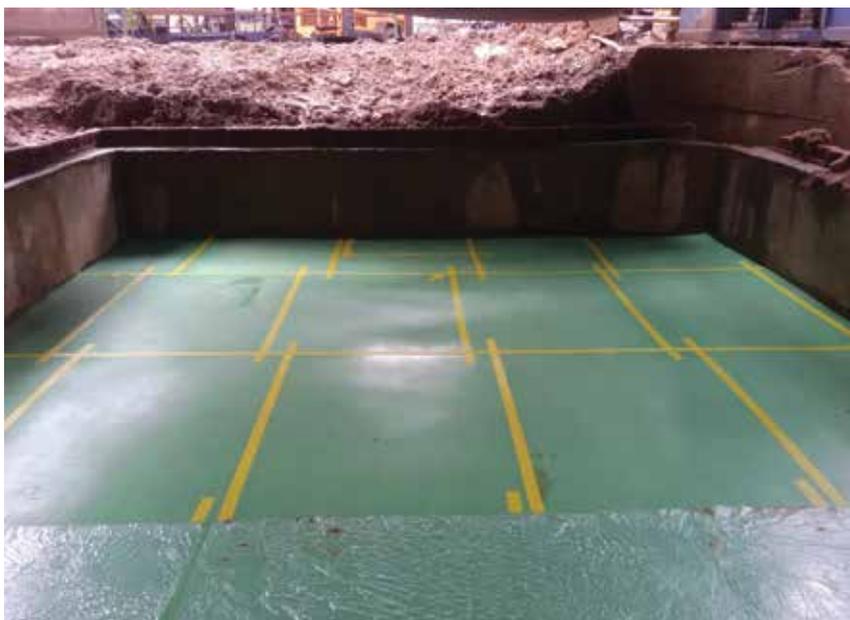
Steigs Power Plant

Image: Steel Plant Jamshedpur

Caption: At a Steel Plant in Jamshedpur, Getzner elastically decoupled the entire fan foundation block, efficiently reducing vibrations and noise.

Image source: Getzner Werkstoffe

Image: Steigs Power Plant



power station from 2013 to 2014, the vicinity to two residential houses and another planned residential complex presented a major challenge. The power plant, with the houses a mere 50 metres away, stand on a rocky subsoil, which favours the transfer of vibrations. To prevent vibrations and structure-borne noise from being transferred, Getzner elastically decoupled the entire foundation block within the plant using Sylomer® materials. 170m² of different types of the high-tech material were used. The result was outstanding: The level difference achieved with the elastically mounted machine foundation lies between 20 and 45 decibels. The system has also demonstrated the predicted natural frequency of 20 Hz.

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