

**7 Nos. SUKHRAS CENTRIFUGES
AT DAURALA ORGANICS LTD.
INSTALLED IN 1994 ON SPRING
VISCOUS DAMPERS**



CASE STUDY

EXTRACT Centrifuges generate high out of balance forces due to unequal settlement of mass at various parts of its high speed revolving basket. Conventionally, a Pendulum System is used. This however transmits significant dynamic forces to the structure/support. Several leading institutes including Civil Engineering department, Roorkee and consultants measured the vibrations and attempts were made to isolate these using conventionally available rubber mountings. Resistoflex were contacted to re-design a suitable Vibration Isolation System. A detailed combination of Steel Springs and Viscous Dampers were designed to absorb the dynamic forces and isolate the Centrifuge. With an efficiency level of 99% to ensure high isolation of forces to structure.

Since RCC inertia block was already cast, steel plates were welded to the reinforcement and isolators were installed using out-rigger brackets.

In April'94, all the seven machines were re-installed. Two at ground floor and five on elevated RCC and steel structures.

The machines were run at full speed with 4.5 Kg mass attached to the periphery of the basket.

Vibration measurement were taken at various points and were found well-within the designed Values. Subsequently machine was run at full load. New Vibration measurement confirmed Centrifuges operation within the designed parameters.

In April '97 Vibration measurements were taken. In most cases transmitted Vibration were the order of 0-20 micron. It was also revealed that maintenance of the machines was drastically reduced after there re-installation on Spring Damper System.

For more detailed information and technical assistance, please contact our Applications Engineering Group.

In the interest of continual development and improvement, the company reserves the right to make modifications to these details without notice

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