

165 TONNES ELECON COAL CRUSHER INSTALLED ON FIVE STOREY STEEL TOWER AT GEB WANAKBORI THERMAL POWER STATION ON STEEL SPRINGS AND VISCOUS DAMPER SYSTEM



CASE HISTORY

Wanakbori Thermal Power Station of Gujarat Electricity Board is situated near Baroda in India. The plant runs round the clock to constantly feed electricity to the neighboring areas and the National Grid.

Coal is brought from different collieries and forms the basic fuel to operate the steam generators.

Four COAL CRUSHERS of Elecon make were installed around the middle of 80's on five storeyed high steel structures.

Despite segregation, hard objects, such as stones, rock ores and metal pieces find their way to the CRUSHERS generating very high transient SHOCK FORCES.

In 1995, major damages were noticed on the steel structure supporting the crushers. Welding at critical places were found to have given away.

RESISTOFLEX were contracted to provide a solution including Finite Element Analysis & RCC foundation.

A complete Vibration Isolation System (including Analysis) was engineered in LONDON in association with their collaborators CHRISTIE & GREY.

The units were manufactured and tested at RESISTOFLEX plant in INDIA.

The COAL CRUSHER was reinstalled using a concrete foundation on STEEL SPRINGS AND VISCOUS DAMPERS. The same steel structure was used.

Vibration measurements taken at various points on the crusher were only 80 microns under no load, and 290 microns under full load. On the supporting structure only 4 microns were measured.

This is drastic reduction from 1265 microns observed on the CRUSHER and 297 microns on supporting structure of the adjoining CRUSHER installed in the conventional manner without any Vibration Isolation 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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