

Case Study - Regupol RAV Structural Isolation



North Wales Newspapers

Client	North Wales Newspapers
Contractor	Eric Wright Construction
Vibration consultant	A W Irwin Associates
Foundation size	28.25m x 5.5m x 2.0m deep

In brief

To reduce the impact of vibration and noise at a new North Wales Newspapers production site in Deeside, a range of Regupol RAV materials were used to isolate the foundation of a KBA Commander Press line.

Project scope

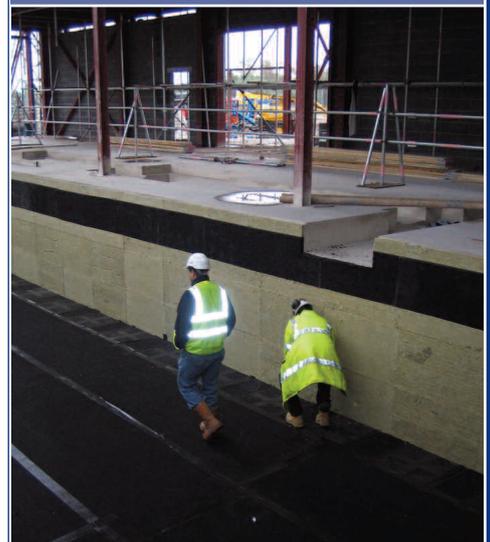
When developing its new £16 million production site in Deeside, North Wales Newspapers had to ensure that provision was made for the vibrations which would be generated by an active KBA Commander Press.

To determine the correct vibration specification a review of the machine's response frequencies and modal forms was undertaken. To avoid resonance the bearing natural frequency had to be between 8-10Hz and both the base and side walls of the press foundation had to be fully isolated. This was to prevent external vibrations from causing quality problems for the printing press and stop press generated vibrations from entering the building structure.

The construction phases involved the pit and isolated foundation block, with a 4.3m high concrete press table cast on top to provide support for the 540 ton KBA Press. To minimise problems for the paper loading system, it was deemed critical for the table and foundation block to be level within 2mm of the surrounding floor areas, which made material creep a primary consideration.



Regupol RAV materials were used to isolate the foundation of a KBA Commander Press



Results

CMS Vibrations met the criteria by identifying and installing a range of high performing Regupol RAV anti-vibration materials.

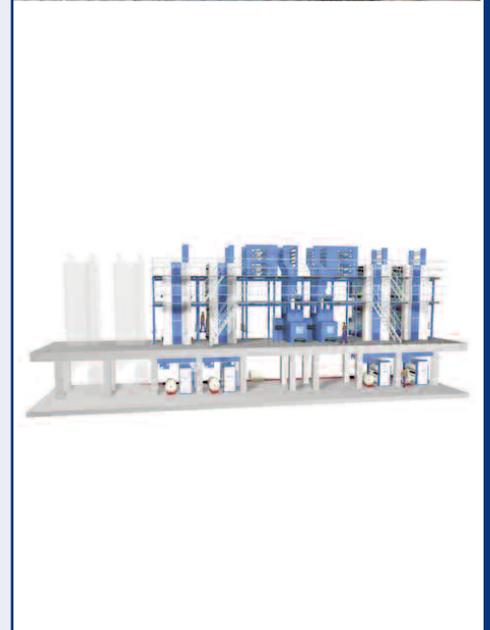
On the base of the foundation, 155m² of Regupol RAV200 was installed with separate Regupol RAV400 bearings inlaid into the RAV200, both at a thickness of 60mm.

This system was designed specifically to withstand the heavy loads, deliver effective isolation and at the same time minimise long term creep.

For the foundation sidewalls, 69 linear metres of Regupol RAV300 was installed in 50mm thick bearing strips. The material was placed around the collar of the foundation to a depth of 500mm, between the floor slab and foundation block.

Benefits

- Excellent dampening and isolation characteristics
- High load bearing capabilities
- Environmentally friendly and fully recyclable
- Quick and easy to install
- Cost effective
- Minimal creep
- Independently tested by the Institute of Structural Dynamics at the Technical University of Dresden, Germany



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