

Brecon Vibrationstechnik GmbH, 50933 Cologne, Germany

SL-Vibration in combination with Omnivib Control Technology

After the take over of an existing production facility located in Nottuln, Germany, it was clear to the companies' management, Mall Umweltsysteme GmbH, that they needed to modernize and expand the existing production facilities. With the Synchronized-Vibration Technology (SL) in combination with the Omnivib-Control Technology from

Brecon, they found a solution that fulfilled the high standards of productivity and concrete quality equal to their other locations. At the same time they could combine the existing equipment and the new technology to one system. The effect of the noise reduction was an essential advantage to the SL-technology.

The company Mall Umweltsysteme GmbH produces environment systems to protect water and soil, e.g. machinery for rainwater rationing, sewage treatment and for the storage of wood pellets. To gain additional market potential in the northwestern part of Germany and the Benelux-countries, they purchased a concrete plant in the northern part of Germany in 2006. This was their fifth production facility they had acquired (Fig. 1). Mall realized that it was necessary to expand the technology and market-orientation of this new plant. After testing with SCC, and not being completely satisfied with the production results, e.g. cracking in the finished concrete product, they came to the conclusion that they would use high frequency vibration for the consolidation.

- Highest concrete quality
- High productivity in the tank production
- Noise reduction
- Compatibility with the technology of their other facilities

Also for the new Control Technology they had precise requirements:

- Flexible
- Clear installation
- Easy operation

In addition to the wall mounted control unit, they were searching for a vibration solution that they could use on different forms and in other Mall plants. The demands for this partial solution were mobility and compatibility.

The solution: SL-Vibration in combination with Omnivib Control Technology

After reviewing several offers, there were many reasons that lead them to their selection and decision to integrate the Synchronized-Vibration Technology (SL) of Brecon GmbH. The positive feed-back from other concrete manufacturers about the SL-technology became apparent to them. The noise reduction was an important factor for Mall as well. The compatibility of the SL-technology with the existing technology was a necessity for Mall. To achieve this, Brecon combined SL-technology and the control system Omnivib (Fig. 2). Omnivib allows the integration of several different electrical vibration exciters in one operating system. Nevertheless, the user needs no awareness of the different

vibration generation; he can concentrate on the results of the finished concrete product.

The constant customer input and technical support from Brecon GmbH, during realization period, was instrumental in the decision for this system.



Central control unit of the wall mounted Omnivib-Systems

Very important were:

- Competent and practical consulting
- Meets delivery dates in short time-span



Mobile control unit for SL-vibrators (red) and conventional vibrators (green)



The company Mall Umweltsysteme GmbH in Nottuln, Germany

Requirements for Vibration-Technology

In order to sustain the same production quality in Nottuln as they have in their other facilities, they needed the following requirements for the technology that would be installed:

Five weeks after the order was placed with Brecon, production was commenced per the scheduled date.

Production process

For the employees at the new facility, it was a positive change for their working conditions, upon starting production with the new equipment:

- The loss of the long wave beats and the possible speed reduction at the same vibration power lead to a tremendous reduction of noise.
- The operation of the Omnivib-Control for the Vibration Technology is easy, functional and clearly arranged. You can either operate it at the distribution box or by radio control.
- The advantage of using it by radio control is that the worker can check and control the consolidation process right at the form.
- The selection of the form will be indicated by a green light on top of the distribution box. The red light indicates the selected vibrator group on the form. The sequence of the light-bulbs on the distribution box indicate the exact position of each vibrator and where it is located in the core of the form (Fig. 4). This enables the worker to view the order of the working vibrators at a glance.
- During and after pouring of the concrete, with the radio control the worker has the ability to adjust the vibration energy while standing next to the form (Fig. 5). He can select the

groups of vibrators and adjust the vibration frequency and time. To verify the frequency, the large display is visible from any location in the hall.

Mobility = Flexibility

The required flexibility in production of small elements has been realized by a mobile control unit. With the mobile control unit they can either run SL-Vibrators (red CEE-outlets) as well as standard high frequency vibrators (green CEE-outlets) from the other plants (Fig. 3). With two different types of outlets, wrong connections

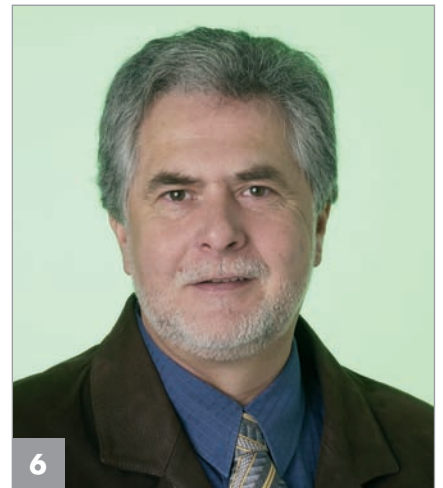


Control of the consolidation process by radio control.

are impossible.

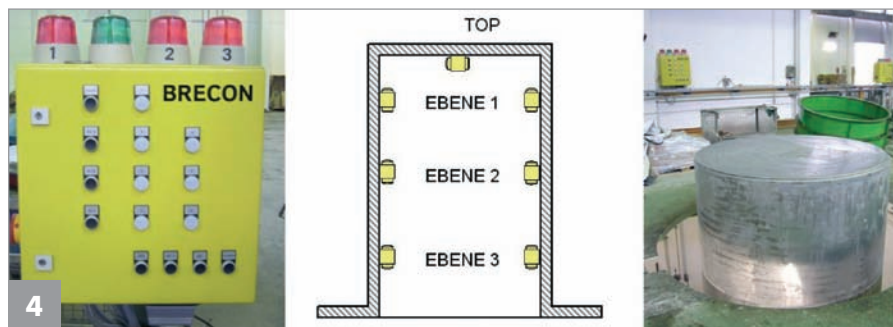
„The people understand it !“

Mr. Karl-Heinz Graf, Technical Manager at Mall Umweltsysteme GmbH, became aware of the positive articles about the SL-Technology; “Noise reduction was the goal for the decision on the new technology”. The operation of the Omnivib-Control Technology is “functional, clearly arranged and easy to use”. “The people understand it!”. The co-operation with Brecon and the good support, along with the on time de-



Mr. Karl-Heinz Graf, Technical Manager at Mall Umweltsysteme GmbH

livery, was very positive”. For future projects, the company Mall will continue to use more Synchronized-Vibration.



The sequence of the light-bulbs on the distribution box indicate the exact position of the vibrator and where it is located in the core of the form.

Further information:



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