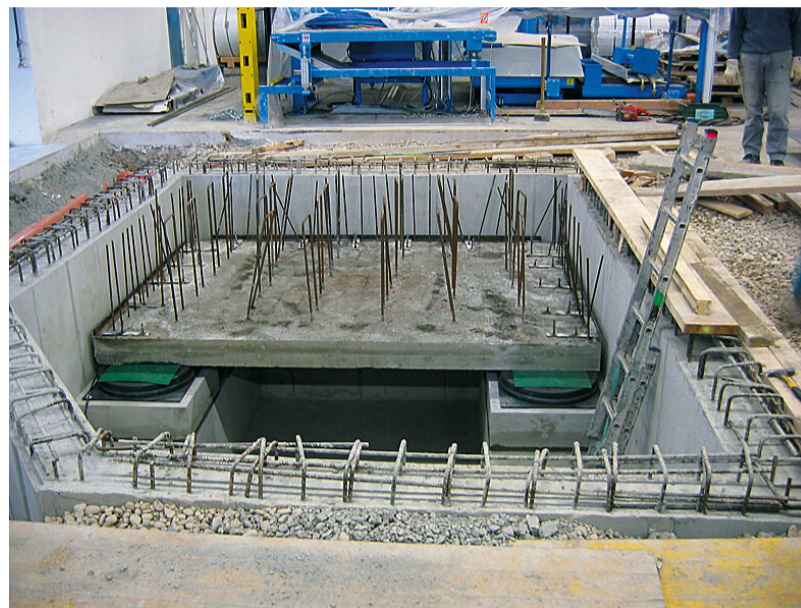


CONSTRUCTION/ARCHITECTURE

ONLY THREE WEEKS FROM PLANNING TO COMMISSIONING

Reliable source isolation of a 23-ton punching machine with FAEBI® rubber air springs with foundation insulation



Foundation block approx. 5.1 x 3.5 x 1.0 m, weight approx. 40 t.

KEYFACTS

- Foundation block 40 t

BACKGROUND

There are different types of isolation: source isolation means the vibration-isolated mounting of a machine through which its vibration power is reduced. In doing this, the environment, such as adjacent machines, the building, as well as people are protected from disturbances. With source isolation, vibration sensitive machines are protected from disturbing ground vibrations.

TASK

For this application a reliable solution for source isolation for a 23-ton punching machine needed to be developed. This was to prevent vibration disturbances from 10 Hz in the adjacent building. Special challenges were very cramped spatial conditions, the pentagonal shape of the machine, the required access to the inspection duct through the foundation block and the extremely low permissible horizontal movements of the machine. And finally, a maximum of three weeks of production downtime was not to be exceeded.

Details foundation block approx. 5.1 x 3.5 x 1.0 m, weight approx. 40 t.

SOLUTION

Our solution was a foundation isolation made out of precast concrete slabs and FAEBI® rubber air springs with level control. This means that the level of the foundation block can be corrected in the event of load changes on the foundation at any time by adjusting the air pressure in the air springs - a significantly improved insulation effect! In combination with a level control, the return of the foundation block automatically takes place to the adjustable target level.

Our services include calculations, the design of the foundation, all formwork and reinforcement plans, as well as steel and steel bending lists. And of course - we also completed this project successfully within the specified time.

EFFECTIVELY COMBINED: FAEBI® AND OSCILLATING FOUNDATIONS

Wir blicken auf eine jahrzehntelange Erfahrung auf dem Gebiet der Schwingungstechnik und Isolierung zurück. Für unsere Kunden entwickeln wir technisch und wirtschaftlich seriöse Lösungen, etwa im Bereich:

- INCREASED PRECISION (RECEIVER ISOLATION) OR PROTECTION OF THE MACHINE ENVIRONMENT (SOURCE ISOLATION)
- NO TRANSFER OF STRUCTURE-BORNE NOISE
- REDUCTION OF VIBRATION AMPLITUDE DUE TO ADDED MASS OR MOMENT OF INERTIA AND LOWERING OF THE CENTRE OF THE GRAVITY
- SIGNIFICANTLY LESS STRESS ON ELECTRICAL COMPONENTS, CONTROLS, MOUNTING ETC.
- HIGHER QUALITY OF RESULTS ESPECIALLY WITH LEVEL-CRITICAL APPLICATIONS

