

USG

Grenzebach helped USG reopen its plant after an earthquake, saving millions

INDUSTRY

Gypsum industry

PLACE

Tecomán,
Colima in Mexico

DURATION

5 months

SOLUTION

Repaired and optimized damaged Grenzebach board dryer

CUSTOMER

Headquartered in Chicago, USG serves construction markets around the world with wall, ceiling, flooring, sheathing, and roofing products that enable customers to build spaces where people live, work and play. The USG network of plants, mines, quarries, and other facilities includes 49 manufacturing locations and 6,900 employees across North America.



INITIAL SITUATION

On September 19, 2022, a 7.6 magnitude earthquake rocked the USG gypsum board plant in the Mexican state of Colima. The production line suffered severe structural damage. At full capacity, the plant produces 79,488 m² of gypsum board per day. As a result, pressure was great to get the non-operational plant back up and running.

But the Grenzebach dryer had been shaken completely off its rail system. With very little room overhead, the five-segment dryer would need to be lifted high enough to repair the damaged attachment points and re-align the rails. The 390-ton gypsum silo had also collapsed.

» Having a trusted service partner like Grenzebach was crucial. They were here in a matter of days, stayed for eight weeks, helped us draft a plan, ordered parts, and advised us through the entire process. We had board rolling off the line by April.» «

Carlos Romero

Director of Manufacturing & Supply Chain
USG LATAM



CHALLENGES

The board dryer comprises five segments. These segments normally mount onto rails that allow the oven to extend in length as it heats up. The earthquake caused two of these segments to completely leave their rails. The tracks beneath the other segments had shifted.

To execute the repairs, all segments had to be lifted. Each one weighs 120 tons. The derailed segments only required a lift of 100 - 200 mm. Workers needed to physically access

the area beneath the shifted segments, however. This required a lift of at least 750 mm. There was only 800 mm of space between the ceiling of the production hall and the top of the dryer. And without a silo, production would need to somehow be synchronized.

IMPLEMENTATION

Working with the customer was seamless and highly effective. When the Grenzebach technician arrived, USG had, as requested, already removed the dryer doors, disconnect-

ed electrical power lines, and capped the gas lines. The team then used hydraulic lifts to elevate the segments enough to repair the attachment points and realign the tracks.

In the process of these extensive repairs, Grenzebach also examined the airflow in the dryer. Adjustments minimized the amount of unsaturated exhaust air leaving the dryer and lowered humidity on the dryer floors. These optimizations have reduced gas consumption by 10 % and electrical power consumption by 40 %.

BENEFITS

Millions saved

By helping get the plant back up and running five months ahead of schedule, Grenzebach saved USG millions in lost revenue.

Lower consumption

Airflow optimizations proposed by Grenzebach lowered the gas consumption of the dryer by 10 % and electrical consumption by 40 %.

Seamless teamwork

The USG and Grenzebach experts were able to reopen the plant under very difficult conditions without compromising product quality.

CONCLUSION

Three months after the reopening of the Tecomán plant, production had already reached 90 % of the previous capacity. And this without a functioning gypsum silo, which meant synchronized production — just another example of how the interdisciplinary team quickly resolved many thorny issues. None of it would have been possible without Grenzebach's and USG's commitment to teamwork, safety, and preparedness across all its departments as well as its external suppliers.

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