



SUCCESS STORY

INCREASED COMPRESSOR RELIABILITY RESULTS IN FEWER EMISSIONS AND EXTENDED LIFETIME

During its preventive maintenance cycle, a crop nutrition company and provider of environmental and agricultural solutions identified severe corrosion in a Non-Burckhardt compressor cylinder. Recognizing the urgency, they sought a reliable and sustainable solution. Burckhardt Compression secured the order for a new cylinder by not only providing an exact replica but also analyzing the entire system and proposing a solution that would address other related issues simultaneously.

CUSTOMER CHALLENGES

- Heavily corroded cylinder
- Replacement cylinder had to be ready for scheduled shutdown in six months
- Cylinder support broke regularly and caused unscheduled shutdowns
- Searching for reliable and sustainable solution
- Dimensional measurement of installed cylinder had to be taken in one day

APPLICATION DESCRIPTION

Non-Burckhardt Compressor			
Type	C 304	Gas	CO ₂
Power	2'410 kW /3'230 hp	Suction pressure Discharge pressure	19 bar / 275 psi 59 bar / 855 psi
Speed	422 rpm	Lubrication	Yes



Compressor cylinder before replacement

BURCKHARDT COMPRESSION SOLUTION

- Re-engineering of cylinder with same connection dimension but as one piece (intermediate piece and cylinder)
- Optimized cylinder cooling for better cooling and easier cleaning
- New, more robust cylinder support offered
- Change of material from cast steel to forged steel
- Production and delivery of new cylinder including liner and all covers within set time frame



Newly designed compressor cylinder

CUSTOMER BENEFITS

- Extended lifetime of compressor
- No unscheduled shutdowns
- Increased availability and reliability
- Improved cylinder support
- Easier maintenance and exchange of cylinder liner
- New one-piece design enables a significant reduction in emissions
- All work done on time and in budget

"The solution offered by Burckhardt Compression was exactly what the customer was looking for. With our systematic approach, our compressor experts not only looked at the obvious issue but wanted to find a holistic solution to improve the reliability and support the customer's sustainability goals. The compressor has been running without issues for almost two years now and we have received another order for the exact same solution for another compressor."

Matthias Reese, Project Management & Engineering at Burckhardt Compression

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