



Independence and significant savings with compressed air contracting

## Fixed-Price Flexibility

High-efficiency compressors from Kaeser Kompressoren produce conveying air for electrode and cathode production at SGL Carbon, located at Frankfurt-Griesheim, Germany.

Of all the elements, carbon is one of the most versatile: Almost our entire energy industry, for example, relies upon carbon compounds and derivatives, as do many sectors in the plastics industry. When combined with the right conditions and substances, carbon can be transformed into hi-tech materials that are stronger and more lightweight than conventional materials. Carbon's exceptional electrical conductivity properties also make it the material of choice for applications where this is of advantage, as is the case at SGL Carbon AG, located at the Frankfurt-Griesheim plant in Germany. The plant's ~250 employees produce

giant electrodes and cathodes, which are used for electric steel manufacture and aluminium production respectively. Today, the raw materials are mainly delivered via road transportation: Coke and associated adjuvant materials, used to facilitate processing, arrive in approximate quantities and are conveyed into large silos with the use of compressed air. This process requires approximately 20 million cubic metres of compressed air per year and is characterised by heavy fluctuation with enormous peak load demand.

### Independence with compressed air contracting

Most of the companies in the Griesheim Industrial Area emerged from the

break-up of Hoechst AG, an established German chemical industries' company that became Aventis after its merger with Rhône-Poulenc S.A. in 1999. However, today's individual companies are still feeling the effects of having once been part of a single larger business.

One such example was at SGL Carbon, which needed to urgently expand its compressed air supply system. Just as with the other component manufacturing lines, electrode and cathode production used to be connected to a centralised compressed air supply. This continued to be the case even after Hoechst AG was split up, as "Industriepark Griesheim GmbH & Co." (IPG) became responsible for facility management. Amongst the wide range of services that IPG provides at the former Hoechst site, both for the newly independent industrial chemical companies and those new to the complex, is the

**Compressed air powered conveyors are used to fill these elevated bunkers**



*The compressed air system is housed in three 40' containers*



*The row of compressed air dryers*

supply of application-specific compressed air.

However, exact analysis of the compressed air demand, which Ulrich Fye, Engineering Manager at SGL Carbon, had had carried out prior to major system expansion, immediately pointed towards installation of an independent compressed air supply: This approach would lead to significant savings, as the conveying air required by SGL does not need to be treated to the same high quality standards as the process and control air supplied by the IGP system. The management at SGL looked at compressed air contracting right from the outset due to the flexibility and independence that it offers. After having



*Connecting two electrodes*

considered various options, the decision was made to select Kaeser Kompressoren as the compressed air provider – not least because of the renowned energy efficiency and reliability of its air systems. Kaeser's ex-



*Carbon electrodes at work in a furnace*

### Compressed air contracting is the perfect investment-free solution for a highly efficient compressed air supply

perts installed the compressor system in three 40-foot containers located centrally on the SGL site. The system comprises seven CSD 122 rotary screw compressors that deliver compressed air to seven desiccant dryers. The compressor installation is owned and operated by Kaeser Kompressoren and the compressed air is billed at a fixed rate



*Finished electrodes ready for shipping*

per cubic metre. However, SGL takes care of the electrical supply for the Kaeser system itself, as it is a large-scale consumer of electricity and is able to benefit from favourable energy prices.



*CSD 122 rotary screw compressors*

Yet this does not mean that efficient operation of the compressed air system is unimportant – on the contrary. In addition, if there's one other priority of key importance, it's reliability; a characteristic for which Kaeser systems are world-renowned. As Ulrich Fye explains, he is just as enthusiastic about Kaeser's service support, "If something needs doing, Kaeser's service personnel are there within 15 minutes at the very latest, even at night. What more can you say other than... Respect!"

Everyone involved in this jointly planned compressed air supply is therefore more than happy with the results. Ulrich Fye concluded by saying "In order to sustain long-term efficiency, compressed air must be produced and used to suit the needs of the specific air application. Compressed air contracting has enabled us to become independent from the previous air provider without having to make the investment that is normally associated with installation of such a system. Kaeser has also installed a brand new air distribution network, which we will pay off in instalments over the next few years. This makes it possible for us to significantly increase compressed air efficiency and means that we don't have to tie up valuable liquid assets."

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