

**Coke Ovens and associated equipments are large complex systems.**



Coke oven are used to turn coal into coke. The process is done by the charge car loading the coal into the oven. After the coal has been heated to high temperatures the pusher car dislodges the coal into the transfer car.

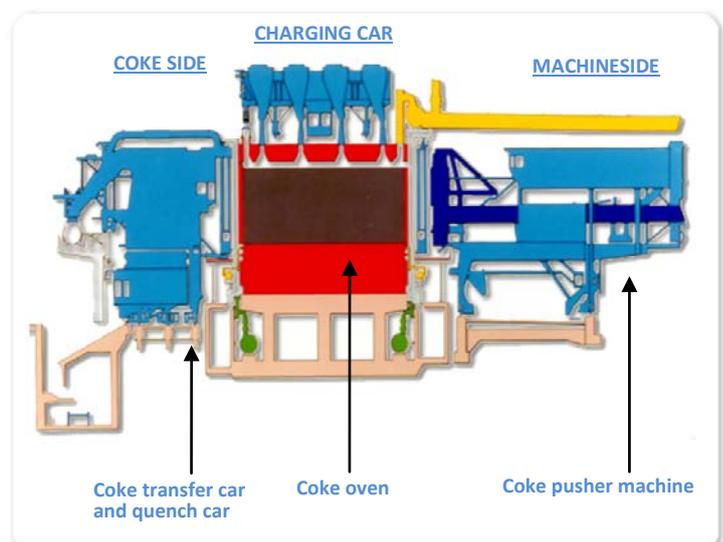
The transfer car then unloads into the quench car which transports the coke to a silo. In recent years coal production has become more popular due to the major advancements in transfer car technologies making the process more environmentally friendly. One of our customers is the leader in push and transfer cars as they adopt a special hood system which captures the pollution after the cook process.

### **Analysis of the lubrication system**

The main equipment to lubricate on this process would be the pusher, transfer and charge cars as well as the actual coke oven gas valves. DropsA has done all of these systems. Attached are typical layouts for a transfer car and the battery coke oven.

The main areas of concern when designing these systems are :

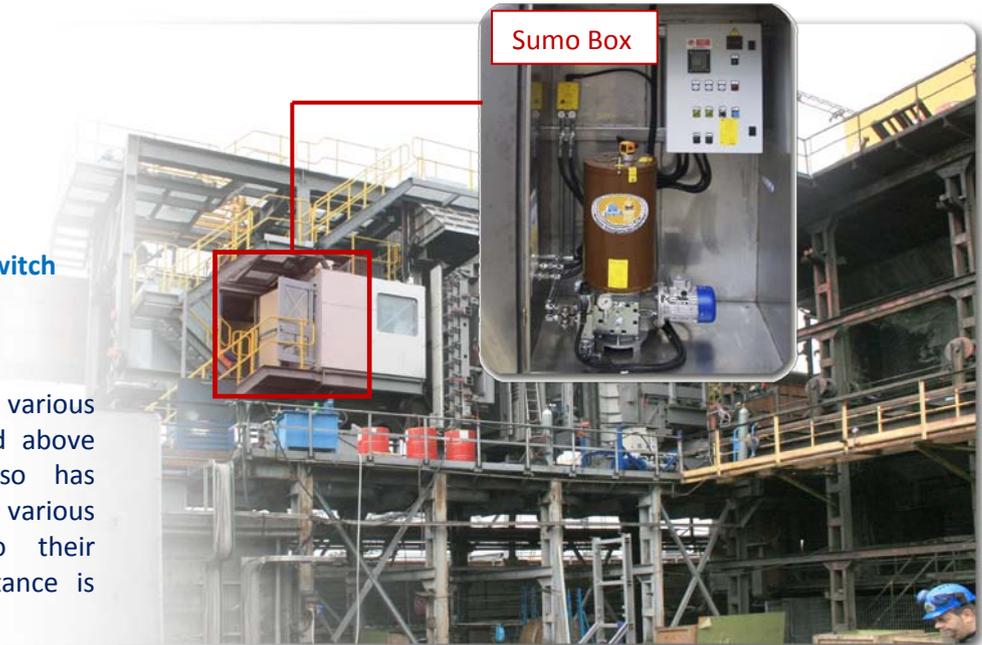
- System is very large. Design pipe size specifications carefully. Please consult DropsA design team as they have experience in pipe layout and in-house pipe spec calculator.
- Some bearings move. This means that careful consideration on some bearings are necessary to ensure whether flexible hoses and/or rotary couplings are required.
- Consider temperature !! Several bearings are very close to the oven and can experience extremely high temperatures. In most cases we used steel armored hoses , some bearing had stainless hoses and some fireproof hoses were also needed.



DropsA proposed:

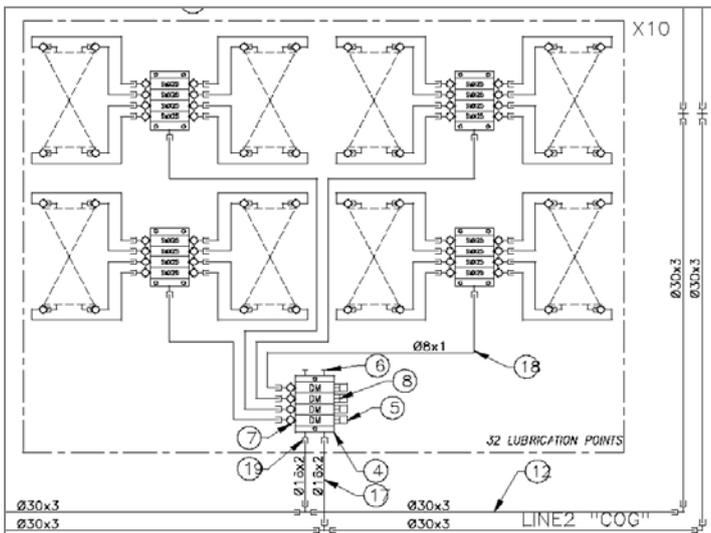
- SUMO in Box
- Vip5 Plus Controller
- End of Line Pressure Switch
- Dual Line Dividers

Rotary couplings and various types of hoses as stated above were used. DropsA also has installed these systems in various countries and due to their complexity startup assistance is highly recommended.



Gas Valves on Coke oven. 32 points section

**Total project 920 points**



Transfer car. Roller bearings 4 point lubrication section.

**Total project 74 points**

