



# Flavouring steel, cast and rubber



It all comes down to ingredients – What makes CS Additive a reliable partner for carbon and sulphur products?



CS Additive GmbH

## Flavouring steel,

"Ouantum of Solace" is the title of the latest James Bond film. Since the team of CS Additive has devoted itself to the mission of production, processing and selling of carbon and sulphur products, their appropriate movie title could certainly be "Perfect Quantum of Black and Yellow". Without this additive, many commodities would not be strong enough, could not be modified or further processed. The experts for the ideal portion of "black" and "yellow" can be found in Essen, Germany.

he company, which consists of 66 employees, emerged from RAG Additive four years ago. Since then it has been supplying clients world-wide with special carbon and sulphur products, predominantly for the manufacture of steel, iron casting and rubber. Furthermore, carbon products such as metallurgical coke, coking coal and anthracite are provided. Among the approximately 170 customers not only corporate groups from the iron steel industry and major European foundry companies can be found but also medium-sized enterprises either domestic or abroad. The products are prepared and refined at the company's own two plants in Brueggen and Herten, which are situated respectively in the Lower Rhine area and in Westphalia, Germany. The sales of the carbon products, however, are conducted from the head office in Essen.

### Preventing rupture

The core activity of the carbon business is the "black segment", as Managing Director Dr. Kuehn calls it. This refers to Carbolux, a premium recarburising agent based on acetylene coke. This product has been produced for 30 years - if the period under RAG is included. Carbolux increases the carbon content in steel and iron and its purity is responsible for tyre cord not rupturing during processing and use. In addition cast car components are able to withstand high stress levels. Its main field of application is ductile iron, as here low-sulphur recarburising agents are particularly important. The products Carbolux SK, S and D are fabricated from acetylene coke and are each sold either as granules or in the form of pellets in different grain sizes. For two years CS Additive has also been producing Carbolux GKA and Carbolux G, made from electrode graphite. Both product lines are in principle chemically equal, yet they possess differing crystalline structures as far as carbon is concerned. As a consequence, when applying Carbolux GKA and G the graphitic carbon dissolves more rapidly - a highly important aspect as time plays a crucial role in production.



### cast and rubber

### The "yellow segment"

The manufacture of sulphur products takes place in the plant in Herten. Liquid sulphur is regularly delivered by lorries and is converted into bars, flakes, pastilles, granules, pulverised or granulated sulphur. "We provide the broadest supply of solid sulphur in Germany, probably even in Europe", says Dr. Manfred Kuehn. The field of utilization is multi-fold: the range of uses stretch from modelling car shapes as the main component for the modelling paste, to diverse applications such as refractory materials. The most common application, however, is as vulcanisation agent in the process of rubber and tyre fabrication as well as a warrant for brittleness in the steel production. "Once a product lacks brittleness it becomes a difficult task to further treat it – whilst turnings for instance would elongate and not break off in the correct manner", explains Dr. Kuehn. In addition, the plant in Herten produces gas-cleaning compounds, which for example, are applied as desulphurisation agents in water purification plants.

#### Long-time partnership

CS Additive sells and delivers approximately 12,000 tons of processed sulphur and roughly 40,000 tons of carbon products per year. Especially proudly cherished is the strategically long-standing partnership with the world's leading chemical company BASF in Ludwigshafen, Germany, from which CS Additive and its predecessor have been procuring acetylene coke for 30 years. Equally held in high esteem is the distinct regenerative character of the organisation's own production facilities. Dr. Manfred Kuehn: "Acetylene coke is a by-product of BASF's production processes. Sulphur is also a spin-off product in the refining of oil. We sell and process everything to such an extent that initially redundant materials become indispensable intermediate goods - in other words recycling at a sophisticated level."

The company is similarly future-oriented in terms of encouragement of junior employees. As a basic principle they are constantly in search of especially qualified processing engineers. To date they have taken on almost every suitable apprentice. Currently, CS Additive is offering a new trainee-programme for university graduates in engineering and business studies. Temporary employment abroad as well as participation in projects form part of it, with a view to becoming a project manager early on.

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