

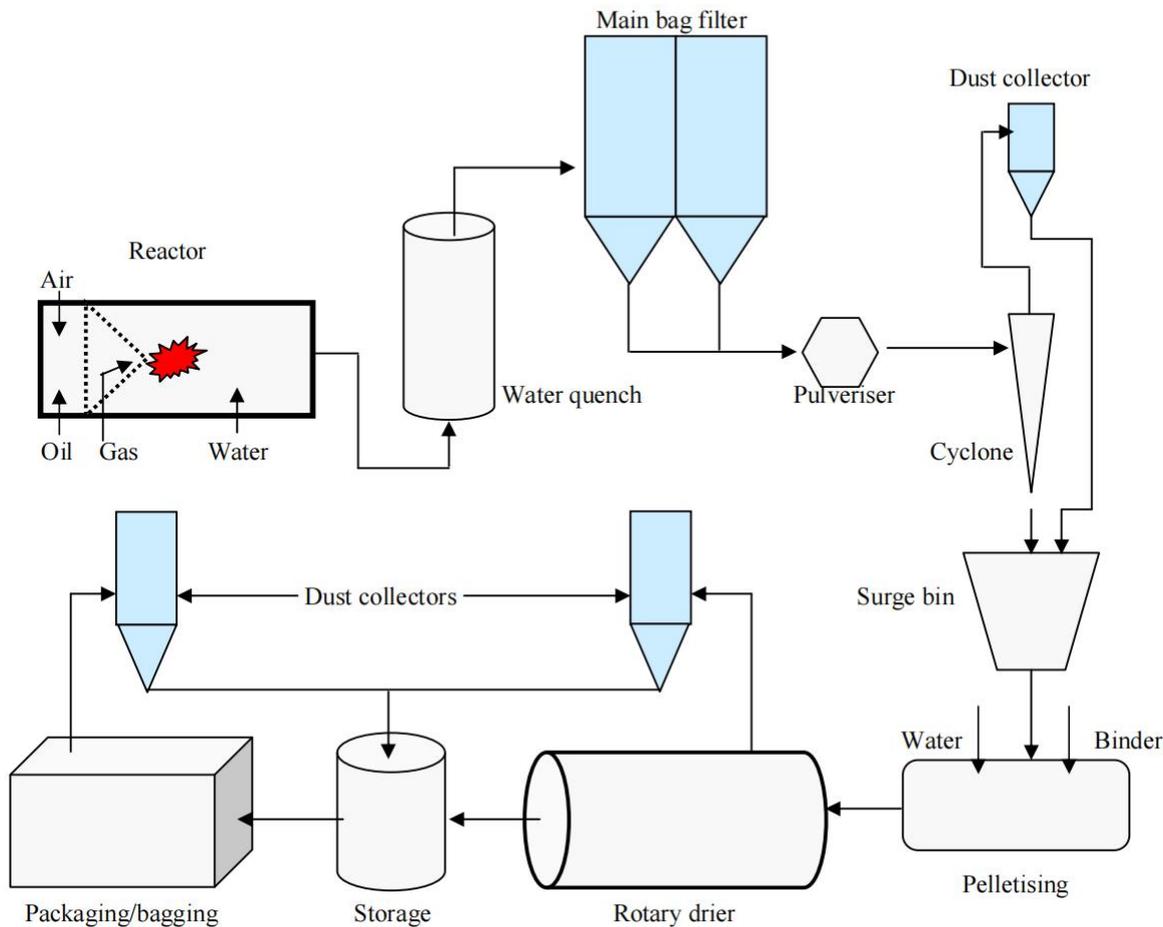
我公司是以依托欧洲德国领军的专业生产工业用技术织物的厂家为原料供应，努力成为国内滤网，滤带技术，和高效空气过滤技术解决方案的技术领军者。

我们将始终坚持一贯的质量第一原则，通过与最终用户和过滤设备厂家的紧密技术合作、良好的服务创造共赢效果，为中国过滤事业踏实的做出自己的贡献！

Carbon Black

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SIMPLIFIED FLOW CHART: CARBON BLACK



Carbon

Black Manufacture

Process Summary:

Carbon black is an amorphous form of carbon, the vast majority of which is produced by means of the so-called 'oil furnace' process, involving the partial combustion and pyrolysis of a (highly aromatic) hydrocarbon feedstock. In this process the feedstock – typically creosote oil or ethylene cracking residue oil - is pre-heated and atomised with a controlled supply of air (also pre-heated), into a closed reactor/gas fired furnace. Under the intense heat of the furnace, ca 1500/1600°C, the oil instantaneously vaporises and pyrolyses into microscopic carbon particles. Water is introduced into the reactor to control the reaction rate, which is critical to the particle size and structure of the final product. On emergence from the reactor, the powder-laden gas stream is further cooled by water quench to ca 220 - 260°C after which it is pneumatically fed to the main bag filter where the carbon black is collected. On release from the filter, the powder passes via a pulveriser; to break up accidentally formed lumps, and cyclones, which separate the powder from the conveying gas, to a palletising plant. Here water and suitable binders are added to make the product easier to handle.

The 'wet pellets' are then dried in a rotary drum drier, which draws a considerable amount of heat from the gases expelled by the main bag filter. Gas vented from the drier is then drawn through a 'purge' filter and the clean air expelled into the atmosphere. The dried, pelletised carbon black is then forwarded to storage and packaging.

Filtration stages:

There are numerous dust collection operations in the manufacturing process, which may involve reverse air collectors or jet-pulse collectors. The primary filter, often referred to as the 'Main Bag Filter', is responsible for collecting the carbon black from the reactor at temperatures in the range 220 - 260°C. Further dust collection is carried out at a slightly lower temperature when venting exhaust gas from the pelletising drier and additional miscellaneous filters are engaged at other strategic points in the process e.g. to vent cyclones and also in the packaging/bagging plant.

In addition to high temperature resistance, the presence of moisture in the gas stream and the use of 'sulphurous' oils would suggest the need for a steam/acid hydrolysis resistant filter media in the dust collectors.

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