Pulverized Coal Injection (PCI) System for Blast Furnace

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The Pulverized Coal Injection (PCI) System is a system to inject pulverized coal into a blast furnace continuously with high precision. The PCI was developed by Denka Consultant & Engineering Co., Ltd. (DCE) based on the technology used for the High Flow Pneuma .

The PCI was developed jointly with JFE Steel Corporation (formerly Kawasaki Steel Corporation) for the purpose of substituting pulverized coal for heavy oil as auxiliary fuel.

The PCI is a system that can distribute pulverized coal into multiple blast nozzles evenly and inject the pulverized coal into the blast furnace continuously with high precision under high pressure.

This system contributes to the reduction of energy costs, the extension of a coke oven's life and the stabilization of blast furnace operation.

The PCI has earned an international reputation for high reliability and reasonable cost.

Features of PCI

(1) The PCI was developed from the High Flow Pneuma. The high pressure tanks installed in a line allow the continuous injection of pulverized coal.

(2) The PCI is simple and compact equipment to inject pulverized coal from a single injection tank (blow tank) through multiple transport pipes to each blast nozzle.

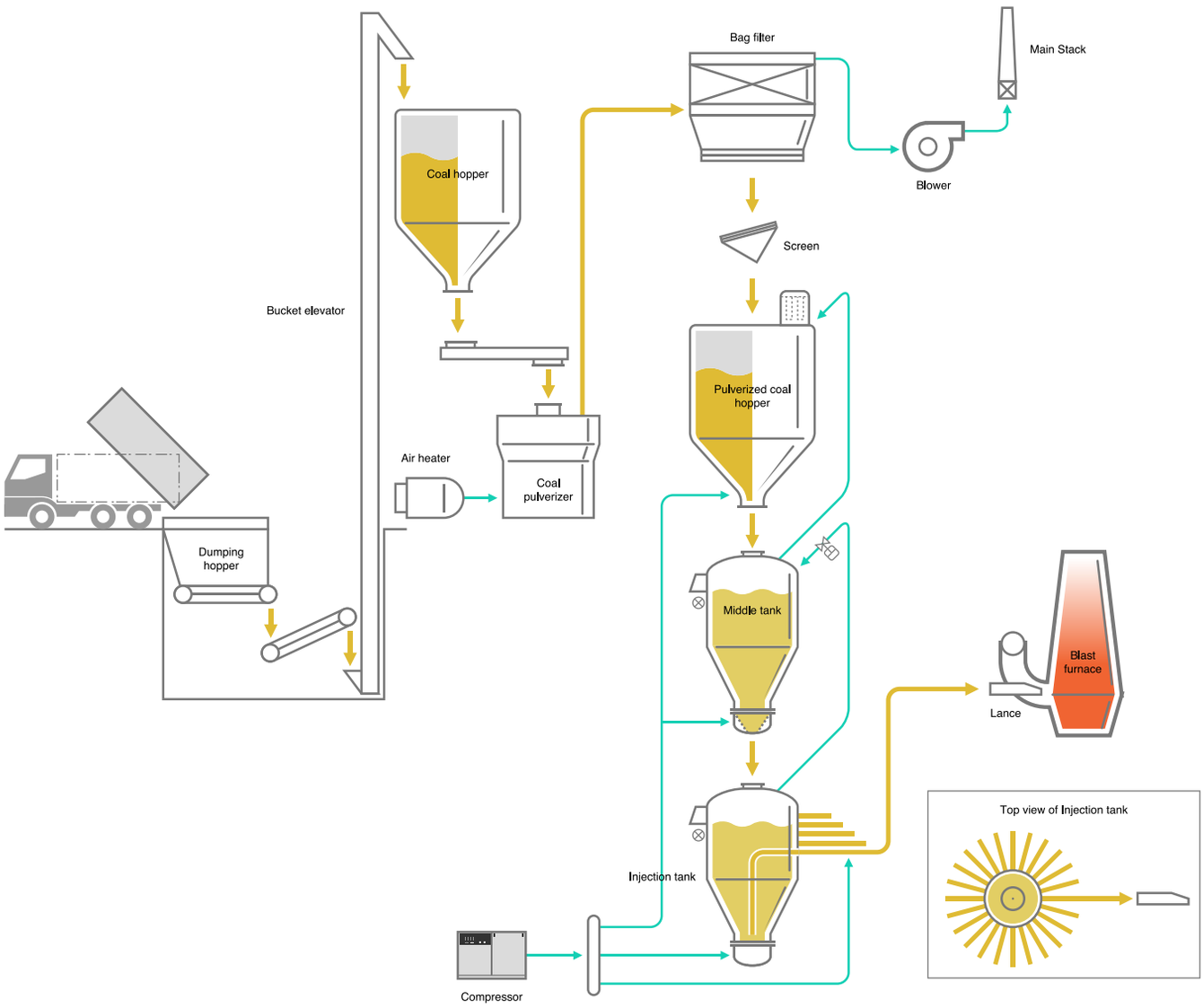
(3) The PCI is a pneumatic conveyance system having no mechanical structure.

(4) The total amount of pulverized coal to be injected and the amount of pulverized coal distributed to each blast nozzle can be controlled with high precision.

(5) The injection amount can be adjusted to a fixed/variable value. The distribution amount can also be controlled arbitrarily.

(6) DCE can design a system to receive, pulverize, dry and inject coal.

Example of PCI Flowchart



* Multiple transport pipes are connected to the injection tank and the tip of each pipe is equipped with a combustion lance.

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