TV-Service – Seeing is believing

BASF in motion

tvservice.basf.com

Digitalization in logistics

A new integrated storage and logistics concept will help BASF significantly reduce logistics costs. The transport volume at the Ludwigshafen site is around 20 million metric tons per year. Since the transport links at the Ludwigshafen site account for a considerable share of costs, this is the focus of the concept.

Another part of the logistics concept is the fully automated tank container depot. It is designed to have a capacity of 2,000 standard (20-foot) container equivalents and has two automatic staking cranes, each with a loading capacity of 75 metric tons. It is trimodal, meaning that goods can be handled via AGVs, trucks and rail.

(01) BASF Class Tankcontainer

(08-14-2019 / 2’00 / EN-MIX / Reportage)

BASF Class Tank Containers, short B-TC, combine the best of two worlds. The new tank containers have been allowed in Europe for road and rail transport since 2015.

The interface between rail transport and AGV transport is a fully automatic tank container depot with a storage capacity of 2000 twenty-foot equivalent units. BASF Class Tank Containers are stored here with up to six set on top of one another, in a space-saving, quickly available and cost-effective manner.

For further information:

BASF SE, Multimedia and Publications, Photo, TV and Film
Silke Buschulte-Ding
Tel. 0049 621 60 48 387
E-Mail: silke.buschulte-ding@basf.com

Comment

"BASF Class Tank Containers, short B-TC, combine the best of two worlds. The new tank containers have been allowed in Europe for road and rail transport since 2015. The worldwide largest tank containers, weighing up to 75 tons when loaded, have a similar volume to tank wagons, but with detachable rail wagons they can be used as flexibly as intermodal tank containers, which are half the size.

On the main run, B-TC are carried with an especially light and quiet rail wagons, while on the first and last mile they are transported without running on rails by other newly developed autonomous vehicles, the Automated Guided Vehicles, or AGV for short.

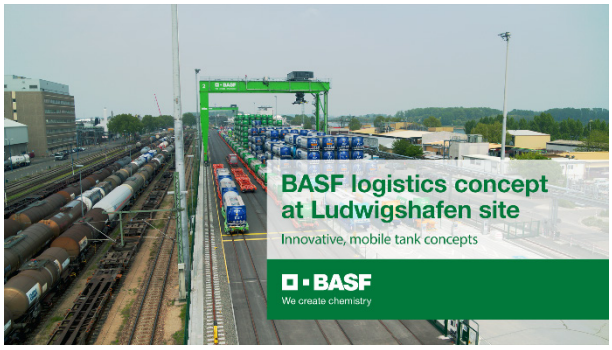
Rail freight transport therefore benefits from autonomous driving on the road and becomes faster and more flexible. Compared to tank wagons, up to four days are saved in transport time with the new system.

The interface between rail transport and AGV transport is a fully automatic tank container depot with a storage capacity of 2000 twenty-foot equivalent units. BASF Class Tank Containers are stored here with up to six set on top of one another, in a space-saving, quickly available and cost-effective manner.

By using BASF Class Tank Containers, self-driving vehicles and the fully automatic tank container depot, logistics become faster, more flexible and 25% cheaper. It's an incentive to relocate more goods on to railways."

(02) BASF logistics concept at Ludwigshafen site

(08-14-2019 / 4'22 / ATMO / Footage)



Flexibility in supplying customers and logistics costs are significantly influenced by the internal transport routes at the Ludwigshafen site. With the commissioning of the tank container storage facility, BASF has now implemented the last element of the integrated storage and transport concept.

At the same time, BASF's rail logistics specialists and the Belgian commercial vehicle manufacturer Van Hool have developed the innovative BASF Class Tank Container (B-TC), which is virtually a tank car with a detachable tank. The B-TC is two and a half times larger than conventional tank containers. It will replace BASF's tank cars in the upcoming years.

For further information:

BASF SE, Multimedia and Publications, Photo, TV and Film
Silke Buschulte-Ding
Tel. 0049 621 60 48 387
E-Mail: silke.buschulte-ding@basf.com

(03) AGV at the tank container storage facility

(08-14-2019 / 5’56 / ATMO / Footage)

The transport from the tank container storage facility to the plants is carried out by an autonomous transport vehicle. The technical term is Automated Guided Vehicle or AGV for short. It can drive on normal roads – autonomously or automatically. The vehicle is electronically connected to a transponder lane and thus finds its way with centimeter precision.

The AGVs transport the new BASF Class Tank Container. The B-TC allow a maximum payload of 66 metric tons and can be transported by rail or by AGV in the factory by road. The use of the AGV reduces the time required to deliver a tank car from around 22 hours today to around one hour in the future.

(04) AGV delivering tank containers

(08-14-2019 / 6’20 / ATMO / Footage)

For the first time, fully automated guided vehicles share the road with other road users - pedestrians, cyclists, car and truck drivers.

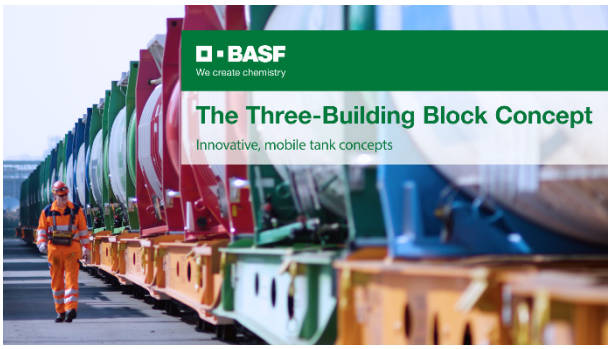
To ensure safety in traffic at all times, the AGV has many additional features: sensors on all sides of the vehicle that detect obstacles and cameras that transmit images in real time to a control center. There, an employee monitors the vehicle's journey and can intervene at any time.

For further information:

BASF SE, Multimedia and Publications, Photo, TV and Film
Silke Buschulte-Ding
Tel. 0049 621 60 48 387
E-Mail: silke.buschulte-ding@basf.com

(05) The three-building block concept

(08-14-2019 / 5’59 / ATMO / Footage)



More than 2,400 rail tank cars are in service on BASF's site. They transport liquid or gaseous chemical goods to the plants. Today, a plant has to wait about a day for an ordered raw material to be delivered. Because delivery is time-consuming.

Therefore, BASF's rail logistics experts have developed a concept. The idea: In the future, transport will be automated on the plant premises. Once the concept has been implemented, plants will only be able to order their containers one hour in advance. The concept consists of three building blocks: large tank containers, automatically driving vehicles and a fully automatic tank container depot.

For further information:

BASF SE, Multimedia and Publications, Photo, TV and Film
Silke Buschulte-Ding
Tel. 0049 621 60 48 387
E-Mail: silke.buschulte-ding@basf.com