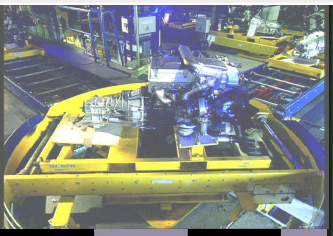
Systematic engine transport (Skid transport)



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Modular system components for in-house transport of pallets / skids can be adapted to suit the products to be transported, hence providing fast solutions for numerous tasks. At the automobile manufacturer, the modification of standard elements (e.g. roller conveyors, chain conveyors, shuttle cars, transfer stations, lifting equipment) for a special steel pallet (skid) loaded with a number of different engines makes targeted transport possible just in time for the engine to be built into the vehicle body if the system is connected to a state-of-the-art intelligent control system.

At DaimlerChrysler AG in Sindelfingen, the engines for the different models are built and stored in a separate production site. The information regarding exactly which models are required in which sequence is not passed on from the main factory to the engine builders until 2 or three hours before delivery is required.

These engines are then loaded onto steel pallets with the appropriate brackets and into a truck which has already been equipped with transport technology. This truck delivers the engines to the final assembly hall. Once it has arrived, the truck reverses to dock onto a ramp where after the rolling doors have opened automatically, the goods are transported onto the transport system. The engines are transported into the hall along four lanes (two lines next to each other and above each other). Here the scanners installed recognize the sequence of storage by the bar codes attached to the pallets. With the help of a number of lifting devices the engines are lifted to the upper transport levels so that as little space as possible is taken up for transport at ground level. The lifting devices are designed as a two column belt lifting device. If it is necessary to change direction, transfer stations or rotating or swivel tables are used.

To ensure a smooth production process the engines are lined up in the correct sequence along the appropriate transport lines. The control system calls up the respective engine at the right time. The capacity of the system means that assembly takes 2 and a half hours. Approximately 1,000 engines pass through this transport network every day. The empty pallets are transported back to the ramp along a separate transport system with an empty pallet buffer. As soon as a truck has delivered engines, it docks onto the empty pallet line and picks up the pallets to transport them back to the production site. This cycle is repeated continuously

Summary:
The basic requirement for a very efficient transport system is maximum availability and low maintenance costs at the same time.