Smartest Engineers and Technicians of the Future



#2015CECECEMASummit

23 - 24 September, Brussels

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Wirtgen

Pivoted drive unit of a road milling machine using the example of W50Ri

In order to be able to work effectively in certain situations such as cramped site conditions, soft verges, etc. small milling machines need a turnable as well as height adjustable travelling drive unit. This means that a travel unit (wheel or track) connected with a pivoting arm can be moved from an outer to an inner position, to create a so-called zero side of the road milling machine.



The new concept utilizes the travel drive as an actuator for the pivoting movement of the drive unit. Due to this no separate actuator is necessary.

Furthermore the pivoting arm is locked automatically in the end positions by using the steering device of the travel unit.





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Benefits of the project:

- Increased efficiency as it is no longer necessary to raise the travel unit and set down the machine on the milling drum
- Comfort benefit as the pivoting arm is locked automatically
- The pivotable drive unit is steerable without any additional device, thus improving the maneuverability of the machine
- Ground is not damaged due to prints of the picks

Project development:

- The team working on the drive unit consisted of 4 people from the engineering department
- The first idea came up in January 2012, start of serial production was in August 2014

Market:

- The W50Ri is the first machine using this concept on the market (since August 2014). In March 2015, the first machine on track-drives with this concept (W100CFi) was launched onto the market
- Machines with this concept are currently sold worldwide

Additional information:

- Customer feedback is positive and the theoretical benefits have already been proven under jobsite conditions
- Durability has been proven by machines being in operation since more than two years







Pivoting process from outer to inner position



