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GROUP



TEKNOAX 2.0



FUTURE IS NOW



THE BEST WAY
TO IMPROVE THE FUTURE IS
TO REINVENT IT.



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TEKNOAX 2.0



iDevice

TECHNICAL ASPECTS

TEKNOAX 2.0 implements important features:

REMOTE TYRE INFLATION / DEFLATION SYSTEM

(based on a pressure monitoring device and a pressurised air duct) that allows quick adjustment of the internal tyre pressure, based on specific operating conditions.

WEIGHT MONITORING SYSTEM

consisting of a load cell that informs the driver of the total payload of the trailer, both for safety purposes and to optimise operating costs.

TOTAL OPERATING TIME AND DISTANCE MONITORING SYSTEM

combined with the weight monitoring system, to optimise maintenance based on actual operating conditions.

TRACEABILITY SYSTEM BASED ON AN RFID TAG

that associates each axle with a unique identification number in order to improve the end user experience, facilitating and reducing maintenance.

ADVANTAGES

Advantages of innovation TEKNOAX 2.0 are: functional, economic, environmental and social:

- ⊙ Improved mechanical, hydraulic and electronic performances
- ⊙ Increased weight monitoring and load capacity, reducing empty weight
- ⊙ Reduced operating and maintenance costs
- ⊙ Calculation of time of use and monitoring of distance travelled
- ⊙ Traceability system and availability of data for planning maintenance
- ⊙ Increased safety, reliability and service life
- ⊙ Better standardisation and modularity
- ⊙ Tyre pressure monitoring and remote inflation/deflation system
- ⊙ Improved road performance and compliance with road regulations
- ⊙ Smart devices for real-time weight assessment on board



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 737848

TEKNOAX 2.0



Technical features



1 INTEGRAL BODY

Is a tubular monobloc axle body with integrated spindles, obtained through hot plastic deformation of the axle body for the distribution of the load with a seamless and continuous structure.

2 SMART FIT

Is the special cold modelling of the square section of the axle body which enhances the axle's flexural strength and makes it possible to couple it to the suspension without any welding. The reduction in the axle body mass compared to solid square-section axle bodies which are still widespread in the agricultural field is in the order of 50% for the same performance levels.

3 STRAIN-FLOW

Is the best geometry for the coupling area between the spindle and the axle body, without any sudden changes in the cross-section, for ultimate safety against strain. The hollow profile of the spindle makes it possible to achieve the best mass-resistance ratio and facilitates the application of tyre-inflation systems which are very popular on cars that run on natural surfaces.

4 AIR SPINDLE

Is the new concept of hollow spindle by Teknoax. Compact and affording a large diameter. It considerably reduces the protrusion of the hub to facilitate the use of wheels without offset even with large-sized tyres. A very rigid structure designed for heavy-duty applications.

5 CLEVER-SEAL

Is the lubrication system by Teknoax with box-type seals that guarantee excellent lubrication of the hub bearings, protecting them against atmospheric agents and allowing clean maintenance. They can incorporate the ABS phonic wheel.

6 CROSSOVER

Is the best word to describe the effort in the design to accommodate all the typical applications of special vehicles, implementing the largest quantity of shared components to optimise spare part stocks, and also implementing products that are already in use on industrial vehicles to improve their sourcing.

7 SPIN JUST

Is an innovative system designed to adjust the axial play in the bearings with an accuracy of a hundredth of a millimetre. The precision adjustment associated with the rigid structure of the spindle-hub assembly increases the durability of the bearings and helps make maintenance less expensive.

STEERING CYLINDER WITH SENSOR FOR RETROSYSTEM

RFID

LOAD SENSOR

SPEED SENS

INFLATE/DEFLATE ROTATING COLLECTOR

SPEED SENSOR FOR RETROSYSTEM

RETROSYSTEM UNIT
(hydraulic + electronic)

TEKNOAX 2.0 UNIT
• Gps
• Accelerometer
• Bluetooth
• NFC (RFID)
• Temperature (2



THE BEST WAY
TO IMPROVE THE FUTURE IS
TO REINVENT IT.

OR

**INFLATE/DEFLATING SYSTEM
PRESSURE SENSOR**

CONTROL PANEL

- Retrosystem
- Inflate/deflate system
- Hydraulic suspension
- Teknoax 2.0 unit

**DRIVER SMARTPHONE
Teknoax 2.0 App**

TEKNOAX 2.0: INTELLIGENT AGRICULTURAL AXLES