Product identification

Mixed model production creates a need for product identification to be able to control the manufacturing process.
Product identification

Body shop  Paint shop  Assembly shop  Yard  Shipping /Port  Retailer
Product identification

**RFID, passive UHF (868Mhz)**
- standardized readers and transponders.
- Multiple suppliers of readers and transponders.
- Read distance > 2m.

**Closed application**
- No need for data storage in transponder.
- Virtual Escort Memory (Database) for product data.

**Disposable transponders**
- Low handling cost
- No degeneration caused by handling and heat cycles.
- The transponder can be left at the car for possible future use.
Product Identification
RFID project, bodyshop in Gent, Belgium

In the summer shutdown 2007
80 readers were installed

During autumn 2007, the old and new
system were runned in parallell

In the spring 2008, all new readers
where integrated and tuned

Autumn 2008 the new system was fully
integrated and operational
Product identification

**Densed reader environment**
110 readers in body shop, 160 readers in paint shop

**Environment with high containment of metal**
Field deviation
Unwanted reflections
0-power fields (Holes)

**High-temp environment**
200° owens

**100% read performance**
Read during movement
Produkt identifiering

Dense reader environment

Minimizing the radio wave pollution

- Triggered readings.
- Short reading time.
- Low output power.
- A good channel planning.
RFID Product identification

Transponder filtering
The content can be filtered to exclude unwanted transponders.

Filter mask: 01 FF

53 A4 FE 02 00 00 6D 32 AE FF 04 33

01 FF 01 00 00 00 4D FF A3 34 6C 5A

C5 F4 2E 4A 01 00 4D 54 2B F0 A4 61
Product identification

System integration

Virtual Escort Memory

Production Control System

Virtual Device

RFID reader

Trig Signal Status

PLC

Product ID

Product ID

Product Data

Product ID