



Sensing technology
for an environmental-friendly
automotive industry



Sensor-Nite NV

Dag van de export

-

*Off shoring, near shoring or back to the
production on the domestic market*

08/06/2010

Tommy Ver Elst

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Sensor-Nite history/timeline

- 1996-2000: Foundation and development phase EG product & process
- 2001-2002: Take-over by Epiq. Move pilot line from Belgium to Bulgaria
- 2002: Start small scale production on pilot line level in Botevgrad
- 2002-2003: Scale-up first line process towards 1M pieces (2004)
- 2003-2004: Management change to S-N. Line investment into the group ELEX
- 2005-2007: Intensified customer activity towards production ramp-up 6M
- 2007: Become a separate entity Sensor-NITE as T1 supplier into the group ELEX
- 2008: Annual production volume reaches 8 Million pieces
- 2009: New production facility EPIQ 3



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Operational structure of Sensor-Nite

T1
Supplier

**Tessengerlo
Headquarters**

Sensor-Nite NV
Belgium (HR 51)

100M2

**Sofia
Office**

Sensor-Nite Industrial EOOD
Bulgaria (HR 52)

100M2

Production
Unit

**Botevgrad Production
Plant**

EPIQ EA
Bulgaria (HR 1200 DL/IL)

1400M2

European Sales Organization (Located in Germany & Italy)

USA Sales - Engineering - Distribution

Asia Sales (Located in China, India & Korea)

Operational structure of Sensor-Nite

TESSENDERLO HEADQUARTERS – BELGIUM

- APQP Product project management
- Product R&D/validation/application
- Customer Project management and liability
- Sales & application engineering (>300 final products)
- Financial management & accounting group level
- Technical purchasing/SQA. Selection basic materials & components
- Product change management
- Warehouse & distribution in Genk (JIT over 50)

Tessenderlo
Headquarters

Belgium

Sofia
Office

Bulgaria

Botevgrad
Production Plant

Bulgaria

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Operational structure of Sensor-Nite

SOFIA OFFICE – BULGARIA

- Customer service back & front office. Order entry / EDI
- Financial management
- Human resources department (Sofia/Botevgrad)
- R&D product validation and testing
- Automation group for machines/line-testers development
- Warehouse & distribution (Sofia/Botevgrad)

Tessenderlo
Headquarters

Belgium

Sofia
Office

Bulgaria

Botevgrad
Production Plant

Bulgaria

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Operational structure of Sensor-Nite

BOTEVGRAD PRODUCTION PLANT – BULGARIA

- Different production lines : Chip Line – MI line – Pre-assembly and final assembly line
- Material & production planning
- Material procurement and supplier management
- Process engineering group – process development
- PPAP & IMDS according OEM SOP
- SQA manufacturing (QA system TS 16949)
- Quantity-process expansion

Tessenderlo
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Belgium

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Sensor-Nite Customers

Arctic Cat

BMW

Bombardier

Caterpillar

Chrysler Group

DAF

DaimlerChrysler Truck Group

Delphi systems

Detroit Diesel Corporation

Deutz

Doosan Infracore

FIAT

Ford

Freightliner

GM

GMDAT

Hyundai

IVECO

John Deere

Magna Steyr

Ferrari

Mercedes Car Group

Mitsubishi

Nissan

Paccar

PSA Mack Truck

Suzuki

VAG

Volvo Power-train Corporation

Positive experience producing in Bulgaria

- Loonsvoordeel Bulgarije – België direct niveau (opmerking: grotere jaarlijkse aanpassingen wegens inflatie)
- Werkgeverskost:
 - BG: Brutoloon * 1.2
 - België: Brutoloon * 1.6
- Eigen machines: goedkoper machinepark
- Minder invloed vakbonden
- Grotere visvijver voor directe operatoren
- Goedkopere investeringen in gronden/gebouwen
- Wisselkoers Bulgaarse lev – euro is vastgeklikt
- Max 10% belastingen op bedrijfswinsten

Negative experience producing in Bulgaria

- Opleidingsniveau – talenkennis
 - Daardoor krapte op de markt: dure indirecte werknemers
 - Jaren investeren in mensen
- Weinig of geen automotive know-how
- Moeilijkere communicatie tussen productie en hoofdzetel
- 4 grote regio's in Bulgarije (Varna, Bourgas, Sofia en Plovdiv)
- Overheid speelt niet/te laat in op economische situaties (bv wereldwijde economische crisis) + nog altijd zeer communistisch ingesteld
- Financiële situatie Bulgarije:
 - Hoge inflatie
 - Weinig subsidies



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- HR:
 - Bescherming werknemer
 - Geen interim arbeid
 - Sociale bescherming (vb. Zwangerschapsverlof)

Inbound - Outbound

1. Outbound - Belgium

- Logistic warehouse in Genk (Belgium):
 - Better support for JIT deliveries
 - More possibility for sea freight – air freight (less developed in Bulgaria)
- Better trained logistic people (direct-indirect):
 - T1 automotive supplier (wrong deliveries, packaging, labels,...)

2. Inbound - Bulgaria

- For 90% of the suppliers we work EXW so that we control the transport ourselves. (No groupage for big supplier)

Future development

- Aziatische markt (China, India)
- Problem:
 - High import taxes
 - Long transportation times
 - Competition
- Solution - local production via joint ventures:
 - Lower labour costs compared with Bulgaria
 - Lower material costs
 - Lower import duties
 - Local OEM's
 - Less risk for obsolete stocks,...



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Alvast bedankt