LEHNKERING GmbH, Duisburg
Employees: 2,000

Road Logistics
Employees: 500

Chemical Manufacturing
Employees: 800

Distribution Logistics
Employees: 700

The leading logistics services provider for companies in the chemical industry in the fields of transport, logistics and production services
LEHNKERING GmbH

- Founded in Duisburg in 1872
- About 410 trucks and 680 trailers (10% market share in Germany)
- 6 tank cleaning stations with 14 cleaning lanes
- 20 hazardous goods warehouses with 328,000 pallet places (market leader in Europe)
- 128 synthesis, formulation and packaging facilities (market leader in Europe)
Road Logistics

- Europe-wide transportation of liquid chemicals like acids, bases, dispersions, suspensions etc.
- Temperature-controlled transportation of food like liquid chocolate, fruit juices, oils, liquid sugar etc.
- Tank cleaning stations for chemicals and food (separate cleaning lanes)
- Additional services like driver training, truck washing, fuelling and repair work
- Latest safety and technical equipment
Road Logistics

- LEHNKERING Chemical Transport GmbH
- Laabs GmbH
- FoodTankers AB
Chemical Manufacturing

- Synthesis, Formulation, Packaging, Raw Material Sourcing, Sample Services
- Agrochemicals (65 %) – Fine chemicals (35 %)
- Flexible, reliable and neutral handling of integrated, multi-stage production services for the chemical industry
- Cost-efficient outsourcing projects at our own premises
- Developing syntheses and formulations according to customer specifications
- Facilities in Germany and United States
- The subsidiary Schirm stands for quality, competence and reliability
Chemical Manufacturing

Lübeck
Wolfenbüttel
Schönebeck
Baar-Ebenhausen

USA
Ennis/Texas
Distribution Logistics

- Storing and handling nearly all classified packed dangerous goods in line with Seveso II regulations
- The warehouses are used for regional and Europe-wide distribution or as a production supply warehouse (raw materials & finished goods)
- Filling of chemical products from tanks, trailers and containers
- Value added services like packing, repacking and labelling
- Distribution in Europe via the System Alliance Network
- Import and export services at seaports
Distribution Logistics

Pallet places

- < 5,000
- 5,000 – 9,999
- 10,000 – 19,999
- 20,000 – 39,999
- > 40,000
In-house developed software is used by all business units
Tailor-made software provides flexibility for customers' needs
Approx. 400 EDI interfaces established with customers' ERP-systems (normally SAP)
Most process steps are scanner-supported
High-level IT-availability through redundant server environments and multi-port firewalls
Integrated IT solutions enable slim business processes and low-cost solutions
LEHNKERING Group - QEHS Management System

**QEHS Management System**

- **QUALITY**
  - Quality Management
  - Principals of Delegation
  - Crisis Management
  - Training and Education

- **ENVIRONMENT**
  - Environmental Protection Organization
  - Environmental Protection Officer
  - Hazardous Goods Organization
  - Licensing Management
  - Waste Transport
  - Residual Waste

- **HEALTH**
  - Occupational Safety Organization
  - Occupational Safety
  - Plant and Operational Safety
  - Fire Protection

- **SAFETY**
  - Sabotage Protection
  - Compliance of Anti-Terror Measures
  - Security Plan
Warehouse logistics – Mannheim

LEHNKERING GmbH, Duisburg

Road Logistics
Chemical Manufacturing
Distribution Logistics

Mannheim
Personnel (90)
- 27 white-collars
- 54 blue-collars
- 9 apprentice

Equipment
- 5 warehouses around Mannheim within 50 km
- 19 fire compartments
- 3 fire compartments for temperature-controlled products (15°- 25° C)
- 2 fire compartments for temperature-controlled products (2°- 18° C)
- 46,000 pallet places (incl. outside warehouses)
- Narrow aisle shelf unit with inductively controlled narrow aisle lift trucks
- Covered railway sidings
Warehouse logistics – Mannheim

**Capacities I**

**Main warehouse Otto-Hahn-Straße 21 (30,000 pallet places)**

1990: Commissioning Mannheim I
- 7 fire compartments, ca. 8,200 pallet places (pp)

1998: Commissioning Mannheim II
- 6 fire compartments, ca. 6,300 pp

2002: Commissioning Mannheim III
- 1 fire compartment, ca. 5,500 pp

2007: Commissioning Mannheim IV
- 1 fire compartment, ca. 5,000 pp

2009: Commissioning Mannheim V
- 1 fire compartment, ca. 5,000 pp
**Warehouse logistics – Mannheim**

**Capacities II**

**Warehouse Otto-Hahn-Straße 44** *(2,000 pallet places)*

**2009: Commissioning Mannheim VI**

- 2 temperature-controlled fire compartments *(2°- 8° C + 2°- 18° C)*, ca. 1,000 pp
- 1 fire compartment for block storage, ca. 1,000 pp

**Perspective**

- Option to acquire adjacent plot *(7,500 sqm)*
- Additional 3 fire compartments à 5,000 pp = 15,000 pp

**Outside warehouses** *(14,000 pallet places)*
Approved storage of dangerous goods classes (according to the Association of the Chemical Industry e. V. (VCI))

- Explosive substances
- Aerosols (aerosol cans)
- Flammable liquids
- Flammable solids
- Pyrophoric or self-heating hazardous substances
- Hazardous substances which emit flammable gases in contact with water
- Oxidising substances
- Organic peroxides and self-reactive hazardous substances
- Very toxic hazardous substances
- Corrosive substances
- Combustible liquids neither in Storage Class 3
- Combustible solids
- Non-combustible liquids
- Non-combustible solids

Storing and handling nearly all classified packed dangerous goods
Warehouse logistics – Mannheim
Safety technology

**Danger defense**
- Autom. Ventilation system (5-times volume exchange per hour)
- Gas warning system coupled with ventilation system
- Autom. closing of the fire protection doors – in case of alarm
- Explosion-proof electric installation

**Danger protection**
- Fire detectors with straight connection to fire department
- Sprinkler system with AFFF-foam
- CO2 – firefighting equipment
- Rack sprinkling
- Warehouse sections F-90 firewalls and T 90 protecting fire doors

**Environmental protection**
- Resistant floor coating
- Leakage blocking equipment
- Coated basins to collect firefighting water
- Additional automatically firefighting water detention system
- Loading areas fitted with leakage blocking equipment
QEHS Management System (Certifications)

✓ Quality management system ISO 9001
✓ Environmental management system ISO 14001
✓ SQAS (Safety & Quality Assessment System) by Cefic (The European Chemical Industry Council)
✓ HACCP (Hazard Analysis Critical Control Point)
✓ GSP (Good Storage Practice)

Frequent internal and external audits through...

➢ Internal QEHS-department
➢ Public authorities (Accident inspection, occupational safety and health inspectorate, fire brigade)
➢ Customers
➢ Certifier (see above)
Warehouse logistics – Mannheim

Business models

Business models used

- Distribution warehouse for finished goods – for domestic and international markets
- Pure warehouse function for hazardous substances with particularly high risk potential
- Raw materials warehouse with synchronized supplies for production purposes
- Complete outsourcing (raw materials and finished goods warehousing, dispatch)

Special logistics requirements

- High level of picking intensity with increasingly small consignment lots
- Short order processing times with incoming and outgoing goods
- Covering high warehouse capacity fluctuations
- Efficient distribution networks – domestic and international markets
- High IT requirements
- Value added services

Diversified customer structure = variety of business models
Operating ratios 2012

- Average utilisation warehouse: 43,500 pallet places -> approx. 95%
- Incoming goods: 95,279 tons
- Outgoing goods: 96,367 tons
- Performed orders: 116,903
- Delivery note lines: 390,055
- Distribution orders: 49,289

Quality ratios 2012

- Error-free storage: 99.8%
- In time delivery: 97.1%
- Error-free distribution: 99.9%

High volume and service level managed with highest quality and safety requirements
1. Deeply integrated IT systems by EDI
   - Goods receipt (own production and 3rd party suppliers)
     - SAP → CargoWare: purchase order
     - CargoWare → SAP: confirmation of goods receipts
   - Goods issue
     - SAP → CargoWare: picking order
     - SAP → CargoWare: transport order
     - CargoWare → SAP: goods issue confirmation

2. High picking intensity
   - Approx. 200 picking orders per day in average
   - High variability → +/- 80 %
   - Next year: Increase to 300 picking orders per day
     - (Warehouse centralization in Mannheim and Münster for BTC Europe)

3. Value added services
   - Repacking (creating new articles)
   - GHS labeling (Globally Harmonised System of classification and labeling of chemicals)
   - Taking samples and sample distribution

High integration within the supply chain of our customer
Warehouse logistics – Mannheim
Case study Scotts

1. Dealing with seasonality

2. High delivery quality
   - Temperature-controlled transports
   - Delivery in time-slots (DIY markets)
   - Electronic despatch advise (DESADV) and time slot booking
   - Delivery on single item pallets / in single item layers

3. Value added services
   - Display building and packing
   - Advertising materials storage and distribution
   - Returns management

High integration within the supply chain of our customer

- Collaboration since 1992
- Take-over the complete distribution and warehousing in Mannheim for total Germany in 2002
- Dedicated Scotts warehouse (up to 9,500 pallet places)
Warehouse logistics – Mannheim
Case study Huntsman

1. Storing and handling of fast moving items
   ➢ Complete article range (1,200 Stock keeping units) → approx. 7,500 pallet places
   ➢ Fast moving inventory with 12 times turnover

2. Temperature-controlled warehousing – different temperature level
   ➢ For hazardous goods between 02° and 08° C
   ➢ For hazardous goods between 02° and 18° C

3. Close interaction of both IT systems and additional wide range of administrative processes within Huntsman SAP
   ➢ Goods issue, picking orders, delivery notes, stock comparison report
   ➢ Goods receipt / issue postings
   ➢ Issue of shipment orders and documents
   ➢ Inventory management
   ➢ Creating shipments and shipment costs documents
   ➢ Shipment consolidation

4. Administration and steering of Huntsman transport suppliers
   ➢ Transfer of delivery notes and transport / customs documents to transport suppliers
   ➢ Transport volume planning with transport suppliers

High integration within the supply chain of our customer
Thanks for your attention!