Applying and Refining the Leoni WCS Kaizen Production System

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Applying and Refining the Leoni WCS Kaizen Production System
Travelogue of the LEAN Journey of the LEONI Business Unit Fiber Optics

1. Short Introduction of LEONI
2. LEONI WCS Kaizen Production System
3. Focus areas for the BU Fiber Optics
4. Continuous Improvement of the System
LEONI in figures
Close to our customers – worldwide

>100 years of experience

>90 production facilities

>32 countries

>92,000 employees

5.1 billion EUR in sales (2018)

As at 11/2018
Our Vision:
Passion for intelligent energy and data solutions.
Service and product portfolio

Automotive

(Intelligent) charging cables

(Electronic) power distribution

Cables, cable harnesses, wiring systems and components

Wiring systems

Automotive Ethernet solutions

High-voltage solutions

Battery cables

Modular cable harnesses

Innovative conductor materials
Service and product portfolio  
Industry

- Cable systems
- Cables and assembly
- Fiber optics
- Sensor technology
- Wires and strands
- Training/support
- Services
- Dresspacks

Intelligent products and systems
smart services and solutions
Business Unit Fiber Optics: Global Manufacturing Footprint

Production sites worldwide (2018)

Germany
- LEONI Fiber Optics GmbH
  - Berlin
  - Jena
  - Föritztal
  - Roth
  - Sonneberg
- J-fiber GmbH, Jena
- J-plasma GmbH, Jena

USA
- LEONI Fiber Optics Inc., Williamsburg, VA, USA

China
- LEONI Cable (China) Co., Ltd., Changzhou, China

9 Production sites worldwide
Business Unit Fiber Optics: Extensive value chain
From Preforms to Systems

› Specific requirements concerning LEAN and OPEX at every stage of the value chain
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LEONI WCS Kaizen Production System

Merger of proven Kaizen, OPEX and LEAN Manufacturing approaches with 11 modules

Source: Efficiency Management WCS
LEONI WCS Kaizen Production System

„Roof“ and „Foundation“

**Kaizen Support**
Anchoring the system by definition, promotion and controlling.

**Policy Deployment (Hoshin Kanri)**
Deploying and sharing direction, goals and approaches with each unit of the organization as to achieve aimed plant future states.

**Management of operational Key Performances**
Controlling operational key performances aligned with business goals and strategy.

**Shop Floor Management (Gemba Kanri)**
Leading and empowering shop floor staff to master daily production.

**5S Culture**
Facilitating productivity, safety and quality through a visually oriented system of workplace organisation.

Source: Efficiency Management WCS
LEONI WCS Kaizen Production System

The 6 Columns

**Total Productive Maintenance**
Developing operational performance with a strong focus on asset effectiveness and asset life cycle costs.

**Total Flow Management**
Applying Flow, Pull, Synchronization and Levelling principles in the end-to-end value stream as to increase process cycle efficiency.

**Problem Solving Competence (Kobetsu Kaizen)**
Advancing the ability of an organization and its members to generate effective solutions to operational problems.

**Learning Organisation**
Promoting employees and company skills to progress organizational efficiency and adaptability to changing challenges.

**Standardization**
Establishing operational standards as to maintain improvements, to reduce complexity and to increase transparency.

**Industrial Engineering**
Engineering complex systems or processes through the use of scientific management approaches.

Source: Efficiency Management WCS
The Aspects of System Integration
Establishing Efficiency Managers at each plant

- Progress Tracking
- Implementation on behalf of the Board
- Roll-out and improve
- Lead Plant Concept
- System Roll-out Wave Concept
- Efficiency Management Training Units
- External Training Support
- Efficiency Management Trainee

Source: Efficiency Management WCS
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Refinement of the System for the BU Fiber Optics
Roll-out at each fiber optic plant

The WCS Kaizen Production System is a dynamic system, that grows during the course of time as to support the company value increase.

Source: Efficiency Management WCS
BU Fiber Optics LEAN Academy
Support the cultural change

Source: LEONI Fiber Optics
BU Fiber Optics Tool Cards (some examples)
Support the cultural change

Source: LEONI Fiber Optics
Strict annual auditing routine
Monitoring of the roll-out at each fiber optic plant

![Kaizen Production System](image)

Source: Efficiency Management WCS
Value Stream Analysis and Value Stream Design
Starting Point and strong tool for continuous improvement

Source: LEONI Fiber Optics
Training Within Industry (TWI)
Focus on Job Instruction (JI)

Results of Trainings by Job Instruction Method
› Increase of Productivity
› Shorter Training Time
› Reduction of Scrap and Rework
› Less damage on Tools, Fixures and Maschines
› Less industrial injuries
› Cost reduction
› Higher working morale
› Direct link to Process-FMEA

Source: LEONI Fiber Optics
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Business Excellence and the EFQM Model

Concept for holistic business management

FUNDAMENTAL CONCEPTS

- Sustaining Outstanding Results
- Creating a Sustainable Future
- Developing Organisational Capability
- Harnessing Creativity & Innovation
- Managing with Agility
- Leading with Vision, Inspiration & Integrity
- Adding Value for Customers

Enablers

- Leadership
- People
- Strategy
- Partnerships & Resources
- Processes, Products & Services

Results

- People Results
- Customer Results
- Society Results

Prioritization of three fundamental concepts

Self-assessment

Identification of focus areas

Objectives, measures, indicators

Improvement projects

Support from Swiss Excellence Forum https://www.swiss-excellence-forum.ch
Conclusions
Experience of the Business Unit Fiber Optics

- **Define a Production System suitable for your requirements**
  Overall and agreed set of rules and standards supporting continuous efficiency improvements

- **Establish an Efficiency Manager Support Organization**
  Drive the cultural change within the organisation through change agents

- **Experiment and try out the instruments from the LEAN Tool Kit**
  Value Stream Analysis and Design, TWI work well for us

- **The Production System is dynamic and developed continuously further**
  The Lean Journey never ends!