Spare parts logistics in maintenance

Risk analysis as basis for a lean and efficient spare parts economy

A safe and at the same time cost-efficient spare parts supply is a challenge for many companies. How do I determine the appropriate spare parts processes for my company? How do I select the right spare parts so that my stock service level does not become a problem for the entire company?

We support you with a concept tailored to your needs that combines approaches from our research and years of consulting experience.

Efficient spare parts management in use

Spare parts logistics has grown historically in many companies and is being organized along the way. Illegal warehouses, obscure paper or Excel lists and high, mostly superfluous stock levels interfere with efficient spare parts management. A functioning, cost- and time-optimized spare parts logistics system is an important success factor in the prompt elimination of malfunctions, the implementation of difficult turnaround projects and the fight against the discontinuation of individual components (obsolescence).

An optimal spare parts management is mainly determined by the following three factors, which are implemented with appropriate measures:

1. Increased service level and reduced excess stock through risk assessment of spare parts.
2. Efficient design of your spare parts logistics processes and optimization of the warehouse structure by including obsolescence management as well as the establishment of relevant key figures.

We support you in:

• creating a detailed breakdown of the actual state,
• deriving a target image with integrated process improvements and a structured approach,
• the successful implementation of the measures outlined.

Contact
Dipl.-Ing. Florian Defèr
Phone: +49 241 47705-233
E-mail: Florian.Defer@fir.rwth-aachen.de

FIR Aachen GmbH
Campus-Boulevard 55
52074 Aachen · Germany
www.fir.de
3. Optimization of the procurement processes with a consistent supplier management, the establishment of consignment warehouses and the elaboration of a make-or-buy-strategy.

**Project example: Spare parts management**

Our proven risk approach ensures that the right priorities are set for your spare parts strategy.

The combination of risk and consumption analysis leads to a well-founded strategy development. The interaction of the two aspects procurement and storage must be considered for the identified spare parts or spare part groups in order to derive individual measures. For the prioritization of the measures and the prompt implementation in sub-projects, the importance of the spare part with regard to its failure frequency always has priority over the consumption category. Plant safety must be ensured at all times. It is determined by failure costs, safety-related or environmentally relevant aspects.

**Added value for your company:**

In close cooperation with you, we determine the right measures for your company to optimally prepare your spare parts logistics for the challenges of industry 4.0. Our structured procedures and the application of adequate methods and tools guarantee a smooth project progress within an economically and temporally optimal framework.

Our risk-based approach provides you with a quick overview of critical spare parts, thus enabling you to sustainably reduce excess inventories and effectively increase plant safety.

**Increase your competitiveness through:**

- Avoiding overstocking by effectively evaluating your spare parts stocks and risks,
- Immediate provision of spare parts by increasing the efficiency of spare parts logistics processes,
- KPI-based process and inventory control,
- Increasing the level of service with optimized stocks.

**Defining environment**

- **Internal:**
  - Warehouse structure
  - Stock groups and management
  - IT landscape
  - Process analysis (RASCI matrix)

- **External:**
  - Determine downtime costs
  - Legal requirements
  - Best practice
  - Reference processes
  - Technology

**Analyzing stocks:**

- Determine statistical consumption
- Analyzing value shares of consumptions

**Analyze risk**

- Estimate probability of occurrence
- Estimate extent of damage

**Effect**

- Probability

**Predictability**

- Share of value

**Determine criticality and set priorities**

<table>
<thead>
<tr>
<th>AZ</th>
<th>BZ</th>
<th>CZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>AY</td>
<td>BY</td>
<td>CY</td>
</tr>
<tr>
<td>AX</td>
<td>BX</td>
<td>CX</td>
</tr>
</tbody>
</table>

**Supplier management:**

- Check order and delivery strategy
- Supplier evaluation
- Product group optimization
- Consignment analysis for C parts
- Establish obsolescence process

**Optimize stock strategy:**

- Adjust minimum stocks and lot sizes
- Optimize virtual central warehouse and warehouse structure
- Define disposition strategy per parts group

**Our core competencies**

- Service & maintenance
- Production & logistics
- Information technologies & management
- Strategy & digitization