

QUALITY MANAGEMENT

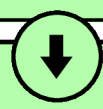


Quality management



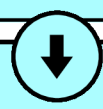
- Quality control
- Quality Improvement
- Quality audit
- Quality management processes
- TQM - Total Quality Management
- Quality project management
- Quality standards
- ISO 9001 - Quality Management
- ISO 14001 - Environmental Management
- ISO 27001 - Information Security Management
- ISO 45001 - Occupational Health and Safety Management System
- ISO 55001 - Energy management system

Quality control system



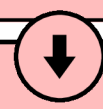
- Definition of quality standards
- Setting control points
- Change management in systems
- Quality risk management
- Qualitative project management
- Implementation of quality standards
- Project risk management
- Risk assessment
- Quality planning
- Quality policy
- Hygiene policy
- Qualitative audit
- Internal audit
- External audit
- Process audit
- Quality system audit

Quality improvement methods

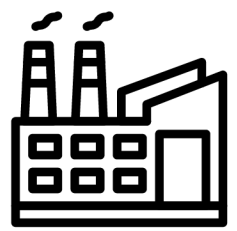


- Kaizen
- PDCA
- DMAIC
- 8D method
- Poka-Yoke method - prevention of errors in production
- Gemba Walk - workplace process monitoring
- Ishikawa diagram (cause and effect diagram)
- Lean management - Lean manufacturing
- Pareto Analysis
- 5S method
- The 5 WHY's method
- Process FMEA
- Six Sigma Method

Statistical tools and techniques



- Statistical process control
- Control charts
- Regulation flowcharts
- Statistical process monitoring
- Process variability control



PRODUCTION CONTROL



Production planning and organisation



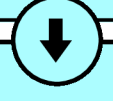
- Production planning
- Capacity planning
- Production planning
- Pre-production preparation
- Production lead time
- Line balancing
- Production flexibility
- Standardisation
- Inventory control
- Production process design
- Production technology and resources
- Production technology
- Technical documentation
- Production resources
- Equipment maintenance
- Predictive maintenance

Production processes



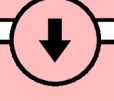
- Production process
- Production line
- Assembly process
- Automation
- Lean management
- Just-in-time (JIT)
- Workflow
- Waste reduction
- Internal logistics
- Material flow
- Production control
- Production optimization
- Performance monitoring

Cost of production



- Production capacity
- Cost of production
- Cost savings
- Production management system (MES)
- Production feedback
- Productivity monitoring
- Production efficiency
- KPI (Key Performance Indicators)
- Work ergonomics

Innovations in production



- Automation
- Digitalization
- Technology and innovation
- Robotics
- Automated systems
- Predictive analysis
- Simulation of production processes
- Virtual reality in production control



HUMAN RESOURCES



Human Resources



- Human Resources Department
- Labour Market
- Recruitment of new employees
- Recruitment
- Selection procedure
- Job interview
- Job meeting
- Employee turnover
- Employee evaluation
- Satisfaction questionnaire
- Promotion
- Job performance evaluation
- Personal assessment
- Remuneration
- Zaměstnanecké výhody
- Výplatní páska
- Příplatek
- Pracovní docházka

Labour Code



- Employment relationship
- Fixed-term employment contract
- Employment contract of indefinite duration
- Termination
- Termination of employment
- Probationary period
- Period of notice
- Full-time employment
- Part-time
- Weekly working hours
- Two-shift working arrangements
- Three-shift working arrangements
- Morning, afternoon, night shift
- Working time pool
- Fixed working hours
- Flexible working hours
- Public holidays
- Overtime
- Hourly wage

Training and development



- Training
- Teamwork
- Work placement
- Job rotation
- Company culture
- Working conditions
- Job satisfaction

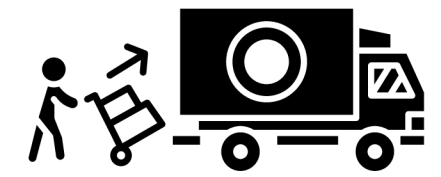
Work safety



- Work incapacity
- Health insurance



LOGISTICS



Production logistics and warehousing

- Warehousing
- Standard pallets
- Shelving
- Inventory planning and management
- Distribution Centres
- Warehouse management systems
- Warehouse management system (WMS)
- RFID systems
- Pick and Pack systems
- Risk management in logistics
- Supply interruption
- Transport Crisis
- Loss of inventory
- Crisis management in logistics

Supply Chain

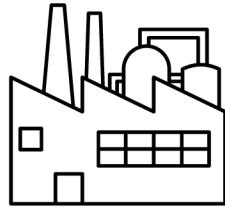
- Suppliers
- Customers
- Distribution
- Retail
- Wholesale
- Logistics companies and service providers
- Freight Forwarder
- Courier services
- Logistics and delivery companies
- Transport
- Trucks
- Trains
- Boats
- Aircraft
- Globalisation and international logistics
- Customs procedures
- International Transport
- Global trade relations

Logistics strategy

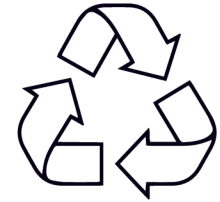
- Lean logistics
- Just in time delivery
- Artificial intelligence in logistics
- Technology trends
- Automated vehicles
- Sustainable logistics
- Environmental aspects
- Low-emission vehicles
- Recycling of packaging

Information technology in logistics

- Inventory management software
- Shipment tracking
- RFID - Radio Frequency Identification
- GPS - Global Positioning System
- Routing



PLASTICS



Plastics



- Polymers
- Monomers
- Thermoplastics
- Thermosets
- Degradable plastics
- Bioplastics
- Compostable plastics
- Plastic materials
- Polystyrene
- Polyethylene
- Polypropylene
- Polyvinyl chloride
- Low density plastics (LDPE)
- High Density Plastics (HDPE)
- Linear Low Density Plastics (LLDPE)
- Polycarbonate

Properties of plastics



- Electrical, optical, thermal properties
- Chemical resistance of plastics
- Degradation of plastics
- Moisture and water absorption
- Mechanical behaviour of plastics
- Melting, softening, glass transition temperature
- Glassy, rubbery, viscous state

Plastics processing technology



- Plastic granulate
- Plastic injection moulding
- Extrusion
- Blow moulding
- Moulding
- Surface treatment - Painting
- Additives and fillers
- Injection moulding technology
- Melt injection into the mould
- Injection moulding
- Cooling of the mass in the mould
- Ejection of the shot
- Internal stresses
- Injection mould design
- Mould maintenance
- Effect of mould quality on product quality

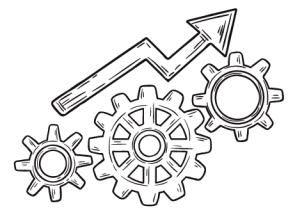
Recycling of plastics



- Plastic waste
- Microplastics and nanoplastics
- Degradability of plastics
- Chemical recycling
- Ecological recycling
- Ecological sustainability
- Waste sorting



ENGINEERING



Engineering



- Machine design and construction
- Manufacture of machinery
- Rapid prototyping
- Product lifecycle management
- Machine maintenance
- Engineering disciplines
- Mechanics and hydromechanics
- Thermomechanics
- Biomechanics
- Kinematics and Dynamics
- Mechatronics
- Materials science
- Technická dokumentace
- Návrhový software
- Odchylky tvaru a polohy
- Tolerování, dílenské měření

Materials and Technologies



- Materials for Machine Design
- Steel
- Aluminium
- Light alloys
- Composites
- Engineering technologies
- Machining
- Turning
- Milling
- Drilling
- Bending
- Cutting
- Welding
- CNC operation and adjustment

Welding

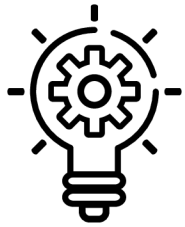


- Welding
- Fusion welding
- Arc welding
- Submerged arc welding
- Laser welding
- Diffusion welding
- Welding machine
- Weld joints and defects
- Work safety

CNC operation and adjustment



- CNC operation and adjustment
- Machine coordinate system
- NC machine reference points
- Offset of origin, correction
- Tool setting on the NC machine
- Entering deviations
- Tool setting
- Machine control system
- Workpiece zero point
- Orientation in the NC program
- Machine parameters in NC program
- Technological cycles of the NC machine



ELECTRICAL ENGINEERING



Electrical Engineering



- AC voltage, DC voltage
- Current - alternating and direct current
- Resistance
- Capacitance
- Inductance
- Power
- Power input
- Efficiency
- Heat loss
- Electrostatic field
- Electric charge
- Electrostatic discharge (ESD)
- Electromagnetic field
- Law of electromagnetic induction
- Electromagnetic compatibility

Power Current



- Thermal, nuclear, solar, wind, hydro power plants
- Generator
- Transformer
- Very high voltage, high voltage
- Power line pylon
- Cables - phase, neutral, protective cable
- Electric motor
- Synchronous and asynchronous motor
- Permanent magnet motor
- Linear motor
- Rotor
- Stator
- Recuperation
- Single-phase and three-phase machine

Low Current

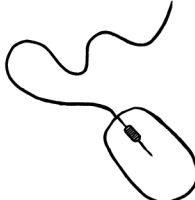


- Electronic components
- Fuse
- Capacitor
- Solenoid
- LED diode
- Transistor
- Semiconductors
- Rectifiers and converters
- Male and female connector
- Crimping, soldering, tinning

Safety when working with electrical equipment



- Electric shock
- Protective equipment
- Tester
- Switches and circuit breakers
- Main switch of the house switchboard
- Distribution switchboard
- Circuit breakers and current protectors



INFORMATICS

Information Technology



- Digitisation of processes
- Robotics
- Programming and operation of robots
- Virtual reality
- Artificial Intelligence
- Terminal
- Barcode and QR code reader
- Search engines
- Multimedia
- Social networks
- Website
- Email and electronic correspondence
- Junk mail
- Online form

Hardware and Software



- Hardware
- Computer
- Notebook (Laptop)
- Keyboard
- Mouse
- Monitor
- Printer
- Cables
- Connecting
- Software
- Operating system, updates
- Data
- Memory

Applications



- Install and Download
- Start menu
- Control panels
- Open application
- Copy
- Backup
- Help
- Error
- Encrypt
- Print documents
- Close window

Internal computer network



- Network administrator
- Network Settings
- Internet connection
- Login
- Login details
- Password
- Antivirus program
- Shared drive
- External drive, cloud, storage