

TRAINING ON PLASTIC INDUSTRY



ABOUT US

Welcome to Pertecnica, where knowledge meets expertise! As a leading employee training institute, we specialize in a diverse range of sectors, providing top-notch induction trainings, refresher courses, and elevating skills through our upgradation programs. We take pride in offering mandatory trainings that ensure compliance and safety trainings across various sectors/industries especially in the dynamic sector of Plastic industry. At Pertecnica, we are your partners in growth, fostering a culture of continuous learning and development. Join us on a transformative journey.



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INDUCTION TRAININGS

- for Plastic industry

Introduction to Plastic Manufacturing Processes:

- Overview of various plastic manufacturing processes, including injection molding, extrusion, blow molding, and thermoforming.
- Understanding the key principles and parameters involved in each manufacturing method.
- Practical demonstrations and plant tours to provide firsthand exposure to different plastic production processes.

Plastic Materials and Polymer Science Fundamentals:

- In-depth training on the properties, classifications, and characteristics of different plastic materials.
- Understanding the basics of polymer science, including molecular structures and polymerization processes.
- Hands-on activities and material testing sessions to enhance knowledge of plastic properties.

Safety Protocols in Plastic Manufacturing:

- Comprehensive training on safety procedures and protocols specific to the plastic industry.
- Understanding of hazards associated with plastic manufacturing processes and machinery.
- Practical drills and simulations for hands-on experience in implementing safety measures.



Quality Control and Assurance in Plastic Production:

- Training on quality control principles, testing methodologies, and standards in plastic manufacturing.
- Understanding the importance of quality assurance in ensuring product integrity.
- Practical exercises and case studies for applying quality control measures in plastic production.

Plastic Product Design and Mold Engineering Basics:

- Overview of plastic product design principles, including considerations for moldability and manufacturability.
- Introduction to mold engineering basics, including mold design, construction, and maintenance.
- Practical sessions on designing plastic parts and understanding the interaction between design and manufacturing.

Environmental Sustainability in the Plastic Industry:

- Training on sustainable practices and environmental considerations in plastic manufacturing.
- Understanding the impact of plastic production on the environment and exploring eco-friendly alternatives.
- Practical initiatives and case studies on implementing sustainable practices in the plastic industry.

Regulatory Compliance and Standards in Plastics:

- In-depth training on regulatory requirements, certifications, and industry standards applicable to the plastic sector.
- Understanding of global regulations, product labeling, and compliance documentation.
- Practical applications to ensure adherence to regulatory standards in daily operations.



Advanced Machinery Operation and Maintenance:

- **Training on the operation of advanced plastic processing machinery, including troubleshooting and optimization.**
- **Understanding preventive maintenance practices to enhance equipment longevity.**
- **Practical sessions for hands-on experience with operating and maintaining plastic manufacturing machinery.**

Plastic Recycling and Circular Economy Practices:

- **Overview of plastic recycling processes, circular economy concepts, and sustainable practices.**
- **Understanding the importance of recycling in reducing plastic waste and promoting a circular economy.**
- **Practical demonstrations and case studies on incorporating recycling practices in the plastic industry.**

Introduction to Industry 4.0 and Digitalization in Plastic Manufacturing:

- **Training on the integration of Industry 4.0 technologies, automation, and digitalization in the plastic industry.**
- **Understanding smart manufacturing concepts, data analytics, and process optimization.**
- **Hands-on experience with digital tools and technologies relevant to modern plastic manufacturing.**



REFRESHER TRAININGS

- for Plastic industry

Advanced Injection Molding Techniques:

- Recap of fundamental injection molding principles and machine operation.
- Exploration of advanced injection molding techniques, including multi-material molding and precision molding.
- Practical exercises and case studies to reinforce skills in optimizing injection molding processes.

Extrusion Process Optimization:

- Review of basic extrusion processes and equipment operation.
- In-depth exploration of process optimization strategies for improving extrusion efficiency.
- Practical sessions with advanced extrusion equipment to enhance skills in troubleshooting and adjustment.

Blow Molding Innovation and Troubleshooting:

- Recap of blow molding fundamentals, including techniques for various types of blow molding.
- Exploration of innovations in blow molding technology and materials.
- Practical exercises focusing on identifying and resolving common issues in blow molding processes.



Thermoforming Best Practices:

- Review of thermoforming principles, equipment setup, and material considerations.
- Exploration of best practices for achieving consistent and high-quality thermoformed products.
- Hands-on activities and case studies to reinforce skills in optimizing thermoforming processes.

Quality Control and Assurance Updates:

- Recap of quality control principles in plastic manufacturing.
- Updates on the latest quality assurance standards and testing methodologies.
- Practical exercises to refresh skills in conducting thorough quality checks and implementing corrective actions.

Safety Protocols and Hazard Awareness:

- Review of safety protocols specific to the plastic industry.
- Updates on new safety standards, regulations, and best practices.
- Practical drills and simulations to reinforce hazard awareness and emergency response.

Environmental Sustainability Practices:

- Recap of sustainable practices and environmental considerations in plastic manufacturing.
- Updates on the latest advancements in eco-friendly materials and processes.
- Practical initiatives and case studies to refresh skills in implementing sustainable practices.



Regulatory Compliance and Certification Updates:

- Review of regulatory requirements and certifications relevant to the plastic industry.
- Updates on changes in global regulations and compliance documentation.
- Practical applications to ensure employees are up-to-date on compliance standards.

Advanced Machinery Operation and Maintenance:

- Recap of advanced plastic processing machinery operation and troubleshooting.
- Updates on preventive maintenance practices and the latest technologies in equipment maintenance.
- Practical sessions for hands-on experience with operating and maintaining advanced machinery.

Digitalization and Industry 4.0 Integration:

- Review of Industry 4.0 concepts, digitalization, and automation in the plastic industry.
- Updates on the latest technologies and tools for smart manufacturing.
- Hands-on experience with digital tools to refresh skills in implementing Industry 4.0 practices.



SKILL UPGRADATION PROGRAMME

- for Plastic industry

Advanced Polymer Science and Material Selection:

- In-depth training on the latest advancements in polymer science and material characteristics.
- Practical sessions for hands-on experience in selecting and testing materials for specific applications.
- Exploration of advanced polymer blends and additives for improved product performance.

Robotics and Automation in Plastic Manufacturing:

- Training on the integration of robotics and automation technologies in plastic industry processes.
- Hands-on experience with robotic systems used in material handling, injection molding, and assembly.
- Practical exercises to enhance skills in programming and optimizing automated systems.

Digital Twin Technology for Mold Design and Simulation:

- In-depth understanding of digital twin technology for virtual mold design and simulation.
- Practical application of digital twin concepts to optimize mold performance and reduce lead times.
- Hands-on exercises using simulation software for mold analysis and improvement.



Advanced Injection Molding Techniques and Optimization:

- Exploration of advanced injection molding techniques, including micro-molding and co-injection molding.
- In-depth training on process optimization for efficiency, precision, and reduced waste.
- Practical sessions with advanced injection molding equipment for hands-on skill development.

Industry 4.0 Applications in Plastic Manufacturing:

- Training on the implementation of Industry 4.0 concepts, IoT, and data analytics in plastic manufacturing.
- Hands-on experience with smart sensors, real-time monitoring, and predictive maintenance.
- Practical exercises to optimize production processes using Industry 4.0 technologies.

Green Plastics and Sustainable Manufacturing Practices:

- In-depth exploration of green plastics, biodegradable materials, and sustainable manufacturing practices.
- Practical initiatives to implement eco-friendly processes and reduce environmental impact.
- Hands-on exercises in developing products with sustainable materials and processes.

Advanced Blow Molding Techniques and Innovation:

- Training on innovative blow molding techniques, such as multi-layer and stretch blow molding.
- In-depth understanding of process optimization for complex shapes and high-performance products.
- Practical exercises with cutting-edge blow molding equipment for skill enhancement.



Thermoforming Automation and Efficiency Enhancement:

- Exploration of automated thermoforming processes and robotics integration.
- Training on efficiency enhancement strategies for faster production and reduced costs.
- Practical sessions with advanced thermoforming equipment for hands-on experience in automation.

Quality Management System (QMS) Implementation:

- In-depth training on the principles and implementation of Quality Management Systems (QMS).
- Understanding of quality control procedures, testing methodologies, and compliance standards.
- Practical exercises and case studies for hands-on experience in maintaining high-quality standards.

Lean Manufacturing Principles in Plastics:

- Training on lean manufacturing principles and methodologies for waste reduction and efficiency improvement.
- Practical application of 5S, Kanban, and continuous improvement techniques in plastic manufacturing.
- Hands-on exercises to implement lean practices and optimize production processes.



MANDATORY TRAINING

- for Plastic industry

Occupational Health and Safety Training:

- Comprehensive training on workplace safety protocols and hazard identification.
- Understanding of personal protective equipment (PPE) usage and emergency response procedures.
- Practical drills and simulations for hands-on experience in maintaining a safe work environment.

Quality Management System (QMS) Compliance Training:

- In-depth training on the principles and compliance standards of Quality Management Systems (QMS).
- Understanding of quality control procedures, testing methodologies, and documentation requirements.
- Practical exercises and case studies for hands-on experience in adhering to QMS standards.

Environmental Compliance and Sustainability Training:

- Training on environmental regulations, compliance standards, and sustainable manufacturing practices.
- Understanding the impact of plastic manufacturing on the environment and strategies for minimizing it.
- Practical initiatives and case studies to ensure compliance with environmental sustainability requirements.



Machine Operation and Safety Protocols:

- **Comprehensive training on the safe operation of plastic processing machinery.**
- **Understanding of machine-specific safety protocols, including lockout/tagout procedures.**
- **Practical sessions for hands-on experience in operating machinery safely.**

Regulatory Compliance and Certifications Training:

- **In-depth training on regulatory requirements, certifications, and industry standards in the plastic industry.**
- **Understanding of global regulations, product labeling, and compliance documentation.**
- **Practical applications to ensure employees are well-versed in meeting regulatory standards.**

Emergency Response and Evacuation Procedures:

- **Comprehensive training on emergency response protocols, evacuation procedures, and first aid.**
- **Understanding of emergency communication systems, evacuation routes, and assembly points.**
- **Practical drills and simulations for hands-on experience in emergency response and evacuation.**

Ethics and Professional Conduct Training:

- **Training on ethical standards, professional conduct, and workplace integrity.**
- **Understanding of the importance of maintaining ethical practices in the workplace.**
- **Practical scenarios and case studies to reinforce ethical decision-making skills.**



Diversity and Inclusion Training:

- In-depth training on fostering a diverse and inclusive workplace culture.
- Understanding of the benefits of diversity and inclusion in the plastic industry.
- Practical exercises and workshops to promote inclusivity and cultural awareness.

Fire Safety and Fire Extinguisher Training:

- Comprehensive training on fire safety principles and preventive measures in the workplace.
- Understanding of fire extinguisher types, usage techniques, and evacuation procedures.
- Practical fire extinguisher training exercises for hands-on experience in fire safety.

Personal Protective Equipment (PPE) Training:

- Training on the correct selection, usage, and maintenance of personal protective equipment.
- Understanding of specific PPE requirements in different areas of plastic manufacturing.
- Practical demonstrations and assessments to ensure proper PPE utilization.



SAFETY TRAINING

- for Plastic industry

Machine Safety and Operation Training:

- In-depth training on the safe operation of plastic processing machinery.
- Understanding of machine-specific safety features, emergency stop procedures, and lockout/tagout protocols.
- Practical sessions for hands-on experience in operating machinery safely and efficiently.

Hazard Communication and Material Safety Data Sheets (MSDS) Training:

- Comprehensive training on hazard communication protocols and the importance of MSDS.
- Understanding of chemical hazards, safe handling procedures, and proper storage practices.
- Practical exercises to interpret and use MSDS effectively in the workplace.

Emergency Response and Evacuation Procedures:

- Training on emergency response protocols, evacuation procedures, and first aid.
- Understanding of emergency communication systems, evacuation routes, and assembly points.
- Practical drills and simulations for hands-on experience in emergency response and evacuation.



Fire Safety and Fire Extinguisher Training:

- **Comprehensive training on fire safety principles, preventive measures, and fire emergency response.**
- **Understanding of different types of fire extinguishers, their usage techniques, and evacuation procedures.**
- **Hands-on fire extinguisher training exercises for practical experience in fire safety.**

Personal Protective Equipment (PPE) Usage and Maintenance:

- **Training on the correct selection, usage, and maintenance of personal protective equipment.**
- **Understanding of specific PPE requirements in different areas of plastic manufacturing.**
- **Practical demonstrations and assessments to ensure proper PPE utilization.**

Machine Guarding and Safety Measures:

- **In-depth training on machine guarding principles and the importance of equipment safety measures.**
- **Understanding of the risks associated with exposed machinery parts and the need for protective barriers.**
- **Practical sessions to inspect and implement machine guarding measures.**

Chemical Handling and Spill Response Training:

- **Comprehensive training on safe chemical handling practices in the plastic industry.**
- **Understanding of spill response protocols, containment measures, and proper cleanup procedures.**
- **Practical exercises to simulate chemical spill scenarios and response actions.**



Electrical Safety and Lockout/Tagout (LOTO) Training:

- Training on electrical safety protocols, identification of electrical hazards, and safe work practices.
- Understanding of lockout/tagout procedures to control energy sources during maintenance.
- Hands-on demonstrations and simulations for applying LOTO principles in real-world scenarios.

Workplace Ergonomics and Injury Prevention:

- In-depth training on ergonomic principles to prevent musculoskeletal disorders.
- Understanding of proper lifting techniques, workstation ergonomics, and injury prevention measures.
- Practical exercises and assessments to implement ergonomic practices in daily tasks.

Confined Space Entry and Rescue Procedures:

- Training on confined space entry protocols, risk assessments, and rescue procedures.
- Understanding of atmospheric monitoring, ventilation, and proper personal protective equipment for confined spaces.
- Practical simulations for hands-on experience in confined space entry and rescue scenarios.

