

4. Evaluate environmental impact both from product manufacturing and whole life cycle

Functional Area: QA

Assessment criteria

- LO4.1: Evaluates environmental impact, identifying the measures and equipment to prevent them.
- Describe the main pollutant which could derive from a given process/production/machining
- Given a real example, propose the best methodology to reduce waste to a minimum and/or contain it to be separately discarded
- Based on a real example of an implementation of a process/realization of a product, calculate the RoM of energy/water/oil/etc. (depending on the case) needed
- For a given material to be used in a process/product suggest the best solution for recycling its waste or the product at the end of its life cycle
- Describe the main concepts related to energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources
- Recognize and report all non-compliant situations according to site policy
- Identify, handle and store/dispose-off dangerous/unsalvageable goods and substances according to site/local policies and procedures following safety regulations and requirements
- Identify Personal Protective Equipment (PPE) and use the same as per related working/process environment and disposal procedure

Knowledge

- Knowledge of laws of physics, chemistry as applicable to environmental issues
- Be familiar with basic regulations as regards discarded material, selective dumping et sim
- Be able to analyse different solutions for waste management in a methodical way including interpretation of experimental data, literature
- Have a full awareness of environmental concerns and be capable to dispose waste following standard procedures

Skills

- Capability to properly read and understand characteristics of materials and of their behavior during machining/production
- Capability to work in multidisciplinary teams for overall environmental impact assessment
- Identify and propose adequate processes for minimum waste
- Identify relevant parameters (e.g. temperature, humidity, RPM, clean room level, etc.) within which the production/machining process must remain for minimum waste and maximum yield
- Be capable to report the findings including all negative aspects
- Represent (through drawings. Workflow, automatic) the entire life cycle from production to disposal

Transferable skills

	<ul style="list-style-type: none">• Capability to communicate in English in an interdisciplinary/international team, in person or tele-conference• Understand descriptions, specifications, technical data and other info typical of the profession in English• Be ready to acquire new knowledge, skills, competences and responsibilities• Be capable to report the findings of Laboratory work in a logical and coherent manner• Awareness about concept of energy conservation, global warming, pollution and use of available resources optimally and remain sensitive to avoid environmental pollution
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