11 Quality management

Criteria	Range	Resource identified
11.1 Quality standards, assurance, control and improvement.	British standards	https://en.wikipedia.org/wiki/British_Standards https://whatis.techtarget.com/definition/British-Standards-Institution-BSI https://www.engineeringtoolbox.com/british-standards-d_761.html
	ISO standards	https://www.iso.org/standards.html https://en.wikipedia.org/wiki/International_Organization_for_Standardization https://www.nqa.com/en-gb/certification/sectors/engineering-manufacturing
	CE	https://ec.europa.eu/growth/single-market/ce-marking_en https://www.hse.gov.uk/work-equipment-machinery/ce-mark-summary.htm https://asq.org/quality-resources/ce-marking https://en.wikipedia.org/wiki/CE_marking
	Engineering bodies (Engineering Council, Institution of Engineering and Technology (IET), Institution of Mechanical Engineers (IMechE), Society of Operations Engineers (SOE))	https://www.engc.org.uk/ https://www.theiet.org/ https://www.imeche.org/ https://www.soe.org.uk/
	Culture of quality, right first time	https://www.ideagen.com/thought-leadership/blog/6-building-blocks-for-creating-a-culture-of-quality https://www.youtube.com/watch?v=6s3cbHIFbFc
	Quality standards (ISO9001)	https://www.iso.org/iso-9001-quality-management.html https://www.bsigroup.com/en-GB/iso-9001-quality-management/

	Inspection and testing	https://electrical.theiet.org/bs-7671/faqs/inspection-and-testing-faqs/ https://www.tradeskills4u.co.uk/posts/inspection-and-testing
	Traceability	https://www.keyence.com/ss/products/marking/traceability/basic_about.jsp https://en.wikipedia.org/wiki/Traceability
	Document management and version control	https://www.girlsguidetopm.com/how-to-do-document-version-control/ https://en.wikipedia.org/wiki/Version_control
	Process capability	https://asq.org/quality-resources/process-capability https://www.itl.nist.gov/div898/handbook/pmc/section1/pmc16.htm https://sixsigmastudyguide.com/process-capability-cp-cpk/
	Statistical process control (SPC)	https://en.wikipedia.org/wiki/Statistical_process_control https://sixsigmastudyguide.com/statistical-process-control-spc/ https://www.youtube.com/watch?v=e5g2NmIUdc
	Six sigma	https://en.wikipedia.org/wiki/Six_Sigma https://www.isixsigma.com/new-to-six-sigma/getting-started/what-six-sigma/ https://www.investopedia.com/terms/s/six-sigma.asp
	Total quality management (TQM)	https://en.wikipedia.org/wiki/Total_quality_management https://www.investopedia.com/terms/t/total-quality-management-tqm.asp
	Failure mode effect analysis (FMEA)	http://www.ihi.org/resources/Pages/Tools/FailureModesandEffectsAnalysisTool.aspx https://www.isixsigma.com/tools-templates/fmea/fmea-quick-guide/ https://en.wikipedia.org/wiki/Failure_mode_and_effects_analysis
	Pareto analysis	https://en.wikipedia.org/wiki/Pareto_analysis https://www.investopedia.com/terms/p/pareto-analysis.asp https://www.mindtools.com/pages/article/newTED_01.htm

	Cause and effect diagrams	https://en.wikipedia.org/wiki/Ishikawa_diagram https://asq.org/quality-resources/fishbone https://www.mindtools.com/pages/article/newTMC_03.htm https://www.youtube.com/watch?v=bNDlg1h-za0
	Quality circles	https://www.bbc.co.uk/bitesize/guides/zhb6vk7/revision/3 https://en.wikipedia.org/wiki/Quality_circle https://www.leansixsigmadefinition.com/glossary/quality-circles/ https://www.inc.com/encyclopedia/quality-circles.html
11.2 Types and applications of Standard Operating Procedures (SOPs) and their purposes.	Types and applications – Manufacturing, quality	https://www.getmaintainx.com/blog/now-is-the-time-for-manufacturing-standard-operating-procedures/ http://www.advice-manufacturing.com/Standard-Operating-Procedures.html
	Types and applications – Maintenance	https://www.onupkeep.com/answers/asset-management/standard-operating-procedure-maintenance-team-sops https://www.reliableplant.com/Read/14671/developing-procedures
	Purposes – Standardisation of activity	https://en.wikipedia.org/wiki/Standard_operating_procedure https://blog.montrium.com/experts/what-are-sops-and-why-does-my-organization-need-them
	Purposes – Customer satisfaction	https://en.wikipedia.org/wiki/Standard_operating_procedure https://blog.montrium.com/experts/what-are-sops-and-why-does-my-organization-need-them
	Purposes – Safety	https://en.wikipedia.org/wiki/Standard_operating_procedure https://blog.montrium.com/experts/what-are-sops-and-why-does-my-organization-need-them
	Purposes – Training	https://en.wikipedia.org/wiki/Standard_operating_procedure https://blog.montrium.com/experts/what-are-sops-and-why-does-my-organization-need-them