

Candidate Information

Position: Process Engineer - Polymer Materials
School/Department: AMIC
Reference: 26/113450
Closing Date: Monday 3 August 2026
Salary: £36,366 to £ 41,727 per annum
Anticipated Interview Date: Monday 31 August 2026
Duration: 3 years

JOB PURPOSE:

We are seeking a highly motivated Engineer to work in AMIC's Sustainable Polymer and Composite team to help and contribute to projects being delivered as part of AMIC's advanced manufacturing activities.

AMIC is a £100M investment through the Belfast Region City Deal - a collaborative, innovative powerhouse of advanced manufacturing set to elevate our region globally. We are supporting economic growth and prosperity for Northern Ireland by creating high quality jobs and increasing inward investment through high value manufacturing innovation clusters.

We are driving industrial transformation, paving the way for future technologies and competing globally with a more sustainable focus. Our launch team of experienced staff has core capabilities in digitalising manufacturing, smart design, sustainable polymers & composites and nanotechnologies & photonics. We're excited to be expanding the team throughout 2026.

We are seeking engineers who want to innovate and apply their knowledge to the challenges of industry and society to support the delivery of industrially focused polymer processing projects within AMIC's advanced manufacturing activities. You will apply your specialist knowledge and experience of materials, methods, processes and process validation to generate innovative research outputs which have a direct economic and technical benefit to companies and sectors. You will work collaboratively with the sustainable polymer and composite team, the wider AMIC team, industry partners, technology providers, national technology centres and academia to deliver key projects focused on advanced polymer processing.

MAJOR DUTIES:

1. Operate and optimise polymer processing equipment, selecting and tailoring process conditions to the material being run with primary focus on materials and extrusion (compounding, film, tape, tube, profile) and secondary focus on injection moulding, rotational moulding, and other polymer processing techniques.
2. Conduct processing trials, material characterisation, and process validation using characterisation data to inform and refine processing decisions to support ongoing project objectives and industrial partner requirements.
3. Apply specialist materials knowledge to troubleshoot processing issues, optimise process parameters, and develop manufacturing solutions for polymer and composite components capturing the link between material properties, process settings, and resulting part quality.
4. Maintain detailed process records, operating procedures, and technical documentation for all processing activities.
5. Work collaboratively with the sustainable polymer and composite team to deliver practical processing solutions for industrial partners within project timescales and budgets.
6. Support business development activities through processing demonstrations, capability showcasing, and technical input to proposals.
7. Ensure all polymer processing equipment is operated safely in accordance with standard operating procedures, risk assessments, and Health and Safety requirements including COSHH.
8. Participate in equipment commissioning, maintenance planning, and continuous improvement of workshop capabilities.

9. Provide technical support and knowledge transfer to industrial partners during on-site trials and demonstrations including guidance on material selection and its processing implications.
10. Undertake any other duties that may reasonably be requested by management.

ESSENTIAL CRITERIA:

1. *Honours degree or equivalent in a relevant engineering or materials discipline, science, or a related discipline with significant relevant industrial experience OR minimum HND in a related engineering discipline with extensive recent and relevant industrial experience.
2. *Demonstrated practical, hands-on experience in at least one polymer processing technique (extrusion / compounding, injection moulding, rotational moulding, compression moulding, or similar) including the ability to relate material properties and behaviour to processing conditions, to optimise parameters and improve the process.
3. *Strong polymer materials knowledge spanning the major polymer classes, their processing behaviour, structure–property relationships, and failure mechanisms, including commodity polymers (PE, PP, PVC, PS, PET), engineering polymers (PA/nylon, PC, POM, ABS, PBT, nano-filled), bio-based and biodegradable polymers (e.g. PLA, PHA, starch- and cellulose-based materials), and high-performance polymers (PEEK, PEI, PPS, PTFE, LCP),
4. *Evidence of hands-on workshop capability including equipment operation, process parameter control, and practical problem-solving.
5. Knowledge and practical application of safety systems, risk management, and COSHH requirements relevant to polymer processing workshop environments.
6. Ability to interpret technical drawings, process specifications, and material datasheets.
7. Evidence of systematic approach to troubleshooting process issues and implementing practical solutions.
8. Ability to work independently and as part of a team to deliver practical outcomes within project timescales.
9. Excellent practical communication skills with ability to produce clear technical records and explain processing activities to industrial partners.
10. Willingness to develop expertise across multiple polymer processing techniques through on-the-job learning and training.

DESIRABLE CRITERIA:

1. Postgraduate qualification in Materials Science, Polymer Engineering, or related discipline.
2. Direct extrusion experience (compounding, film, tape, tube, or profile).
3. Experience with polymer characterisation methods including mechanical testing, thermal analysis, and quality control techniques.
4. Experience with Design / CAD and process simulation software (Moldex, Moldflow, or similar) for troubleshooting and optimisation.
5. Hands-on experience processing bio-based or biodegradable polymers (compounding, melt processing, formulation) and applying circular-economy principles such as recyclate use, design for recycling, or chemical/mechanical recycling routes. Experience with manufacturing automation, process monitoring, or digital manufacturing technologies.
6. Understanding of technology readiness levels (TRL) and scaling processes from development to production.
7. Experience working to formal quality management systems (ISO 9001 or similar).
8. Evidence of participation in collaborative research or industrial innovation projects.