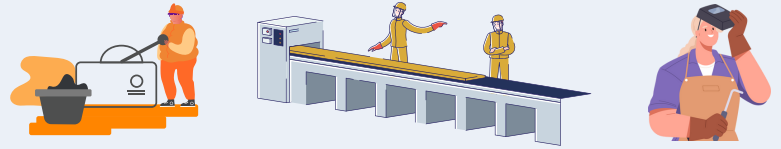


Foundry Workers



Metals and alloys are common inputs used in modern manufacturing, and Foundry Workers acquire the production techniques, knowledge, skills and abilities and best manufacturing practices to be able to shape and manipulate metals and other alloys. The techniques and knowledge of material processing and refining is applicable in transferring to roles within machine operation, metalworking or other raw material processing, giving a degree of freedom to where metalworking operators can transfer within the manufacturing sector.

Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills foundry workers employ in their work:

1. Operation Monitoring
2. Operation and Control
3. Quality Control Analysis
4. Complex Problem Solving
5. Reading Comprehension

Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks foundry workers most regularly encounter:

1. Calculate specific material, equipment, or labor requirements for production.
2. Adjust equipment controls to regulate gas and production material flow.
3. Monitor instruments to ensure proper production conditions.
4. Operate metal or plastic forming equipment.
5. Inspect metal, plastic, or composite products.

Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by foundry workers regularly:

1. Computer-aided design and manufacturing software
2. Industrial control software
3. Inventory management software
4. Analytical or scientific software
5. Office suite software

Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that foundry workers possess:

1. Arm-Hand Steadiness
2. Control Precision
3. Manual Dexterity
4. Trunk and Static Strength
5. Problem Sensitivity

Skills Transferability Matrix

FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills, technical knowledge, tasks,** and **abilities** as outlined by the O*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

Foundry Workers					
Occupations	Skills	Technology	Tasks	Abilities	Total
Plastics processing machine operators	92%	91%	74%	93%	87%
Woodworking machine operators	92%	100%	47%	92%	83%
Glass forming and finishing machine operators and glass cutters	95%	73%	68%	93%	82%
Metalworking and forging machine operators	89%	91%	51%	88%	80%
Machining tool operators	91%	100%	37%	90%	79%
Machine operators, mineral and metal processing	92%	73%	59%	93%	79%
Other wood processing machine operators	92%	91%	41%	91%	79%
Concrete, clay and stone forming operators	94%	64%	52%	92%	75%
Industrial painters, coaters and metal finishing process operators	94%	55%	32%	91%	68%
Material handlers	93%	73%	4%	90%	65%
Pulp mill machine operators	93%	45%	24%	91%	63%
Supervisors, electrical products manufacturing	64%	100%	10%	69%	61%
Aquaculture and marine harvest labourers	92%	45%	2%	91%	57%
Contractors and supervisors, mechanic trades	62%	82%	2%	70%	54%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for foundry workers is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of foundry workers. Lower or no transferability areas are marked in red. Foundry workers share high overall attribute transferability with material processing and machine operation roles. With the nature of work being similar, they are occupations necessitating many of the same skills and abilities. As such, lateral mobility to roles within manufacturing and resource processing is possible. Some transferability exists outside of production, but still within manufacturing, such as industrial painters or material handling roles. This may indicate that though a change in the nature of profession is possible, transferring out of manufacturing is likely to require additional training or education. Some transferability to roles in supervision is observed, with roles in mechanic trades and electrical products manufacturing, but are likely to require additional training.

To learn more about developments, trends and new technologies in Canada's automotive manufacturing industry, visit our website futureautolabourforce.ca.

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