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| Title | **Prepare slip and glazes** | | |
| Level | **3** | **Credits** | **20** |

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| Purpose | The competency standard is designed to enable trainee for different processes i.e. crushing and grinding and will also enable learner to operate the equipment used in slip house to prepare slip and glazes of required composition. |

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| Classification ISCED | 0214 Handicrafts |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **A1: Perform crushing of raw materials** | **The trainee will be able to: P1.** Differentiate raw materials **P2.** Feed the crusher properly  **P3.** Operate the crushing equipments  **P4.** Troubleshoot during crushing operation | **The trainee will be able to:**  **K1.** Understand ceramics and raw materials **K2.** Identify different crushing equipments **K3.** Describe feed and product mesh sizes |
| **A2: Perform batching of raw materials for slip and glazes** | **The trainee will be able to:**  **P1.** Operate the weighing balance  **P2.** Perform calculation of different batches of body and glazes.  **P3.** Add water to slip and glazes according to the required composition.  **P4.** Prepare batches of different types of glazes. | **The trainee will be able to: K1.** understand slip and glazes **K2.** know fluxes, filers and clays  **K3.** Define calculations for batching  **K4.** Recognise different pigments used for color glazes |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **A3: Perform grinding and mixing of raw materials** | **The trainee will be able to:**  **P1.** Charge the ball mill with grinding media and batch **P2.** Calculate the grinding time and RPM(Revolution Per Minute) of ball mill  **P3.** Operate the ball mill  **P4.** Unload the ball mill properly | **The trainee will be able to:**  **K1.** Recognise the types of grinders  **K2.** Define the working principal of ball mill  **K3.** Classify types of grinding  **K4.** Identify grinding media and liners used in ball mill. |
| **A4: check and adjust the parameters of slip and glazes** | **The trainee will be able to:**  **P1.** Check residue, viscosity, and density of slip and glaze  **P2.** Add suitable amount of water and deflocculates. | **The trainee will be able to:**  **K1.** Understand the factors effecting quality of slip and glazes  **K2.** Explain density, viscosity and residue of slip and glazes |
| **A5: Perform filtration of the slip** | **The trainee will be able to: P1.** Charge the blunger properly **P2.** Operate the pump  **P3.** Calculate the mixing time  **P4.** Adjust the filter cloth in the plates a  **P5.** operate the filter press  **P6.** Dissemble the plates and collect cake from press. | **The trainee will be able to:**  **K1.** Identify the working principle of blunger  **K2.** Define operation and working principal of filter press  **K3.** Describe filtration flow rate and pressure in press |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **A6: Perform vacuum kneading of the filtered cake** | **The trainee will be able to:**  **P1.** Charge the pug mill properly with filter cakes  **P2.** Operate the pug mill  **P3.** check vacuum pressure of Pug mill  **P4.** cut and handle Pugs properly | **The trainee will be able to:**  **K1.** Explain the working principals of Pug mill  **K2.** Define the functions of vacuum pump in Pug mill |