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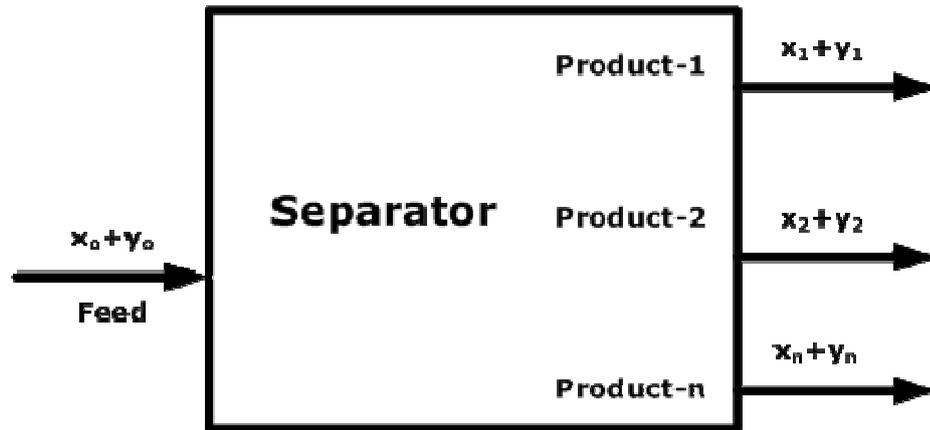


Figure A.1: Particle separation variables at separator inlet and outlet.

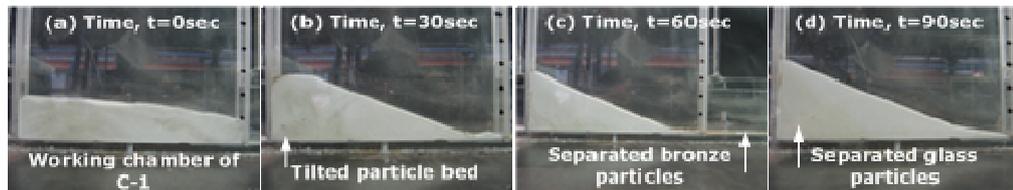


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Figure A.3: Time averaged (a-d) particle separation behaviour of a 90:10 %wt glass and bronze working mixture-A forming an initial average static particle bed height of 40mm in C-1.

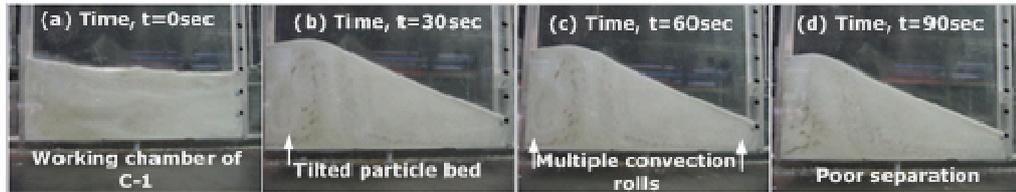


Figure A.4: Time averaged (a-d) particle separation behaviour of a 90:10 %wt glass and bronze working mixture-A forming an initial average static particle bed height of 60mm in C-1.

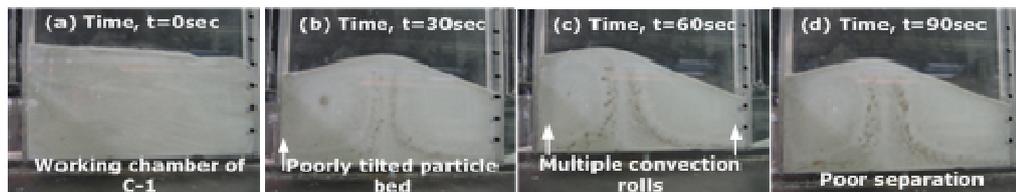


Figure A.5: Time averaged (a-d) particle separation behaviour of a 90:10 %wt glass and bronze working mixture-A forming an initial average static particle bed height of 80mm in C-1.

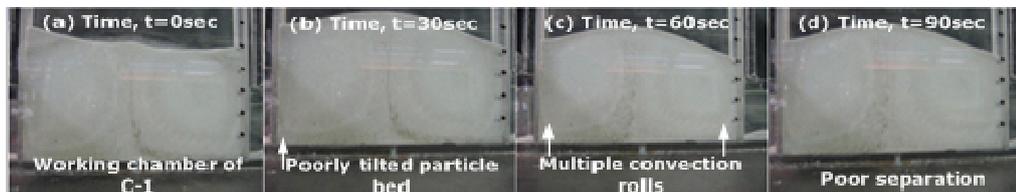


Figure A.6: Time averaged (a-d) particle separation behaviour of a 90:10 %wt glass and bronze working mixture-A forming an initial average static particle bed height of 100mm in C-1.

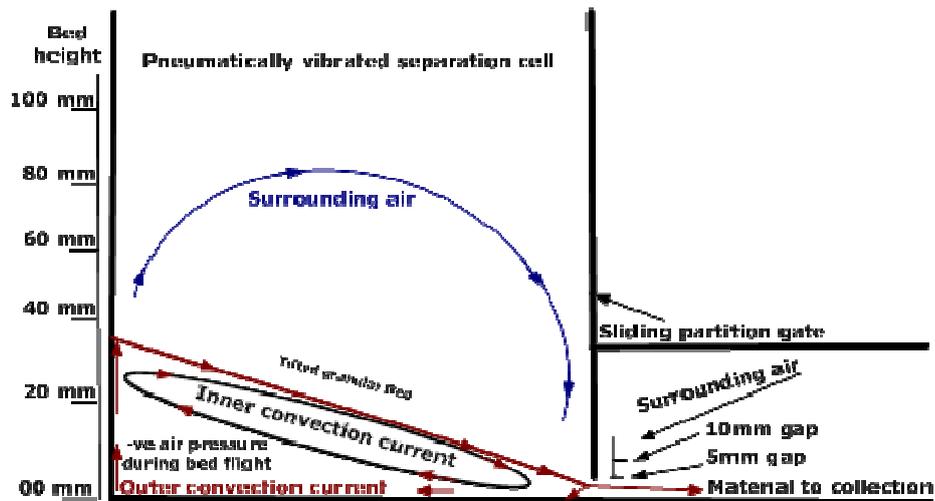


Figure A.7: Visually observed convection currents in the 20 and 40mm width separation cells at particle bed heights of 20 and 40mm with 90:10, 80:20 & 70:30 %wt glass and bronze working mixtures-A, B and C.

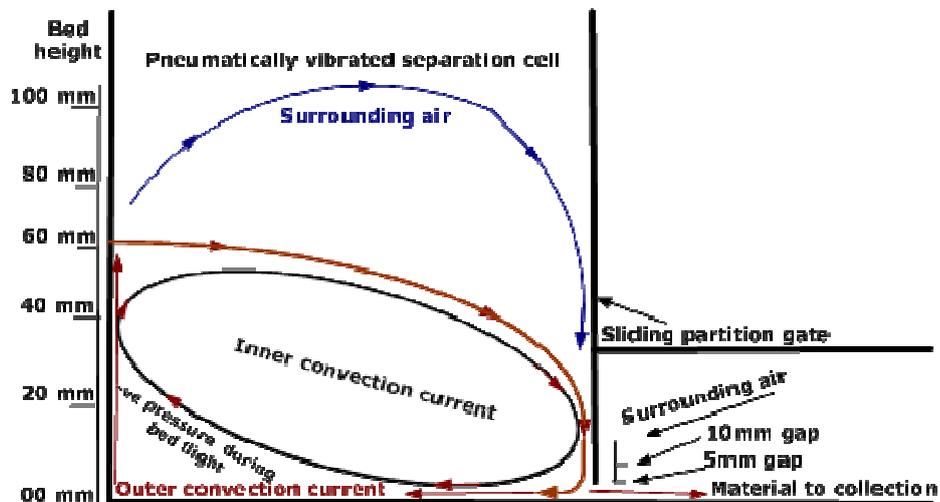


Figure A.8: Visually observed convection currents in the 20 and 40mm width separation cells at particle bed heights of 60mm with 90:10, 80:20 & 70:30 %wt glass and bronze working mixtures-A, B and C.

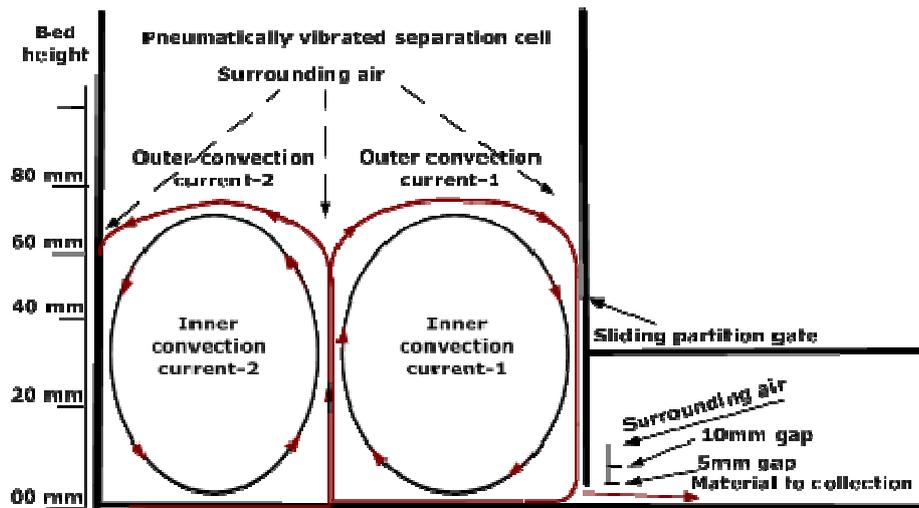


Figure A.9: Visually observed convection currents in the 20 and 40mm width separation cells at particle bed heights above 60mm with 90:10, 80:20 & 70:30 %wt glass and bronze working mixtures-A, B and C.

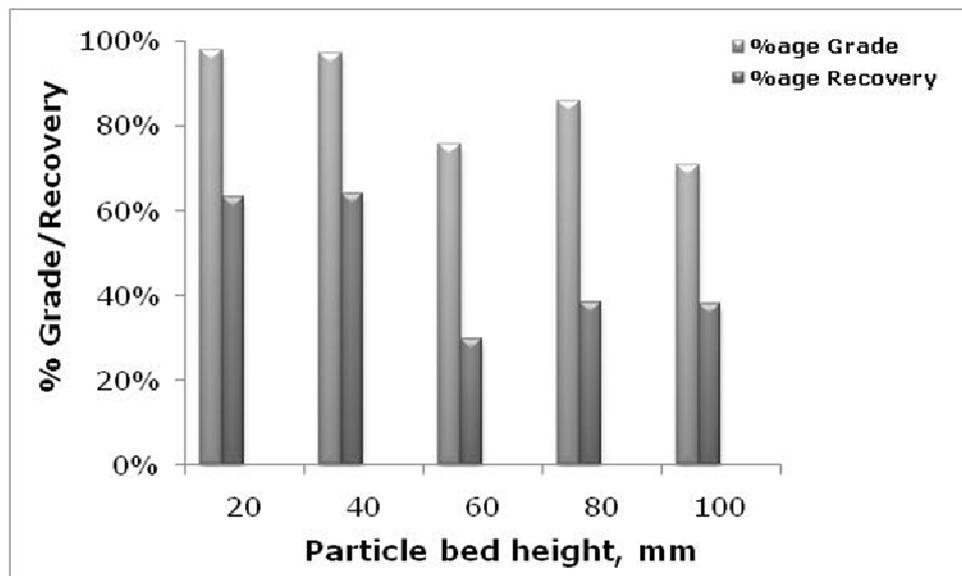


Figure A.10: Grade and recovery of bronze particles from mixture-A in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30 \pm 10\%$ Hz and $3 \pm 10\%$ were used in this work).

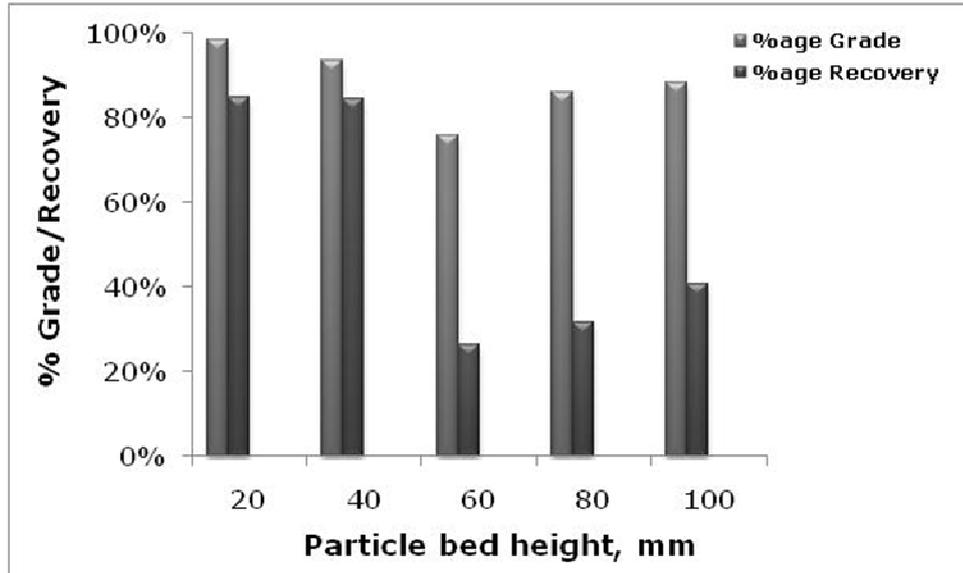


Figure A.11: Grade and recovery of bronze particles from mixture-B in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

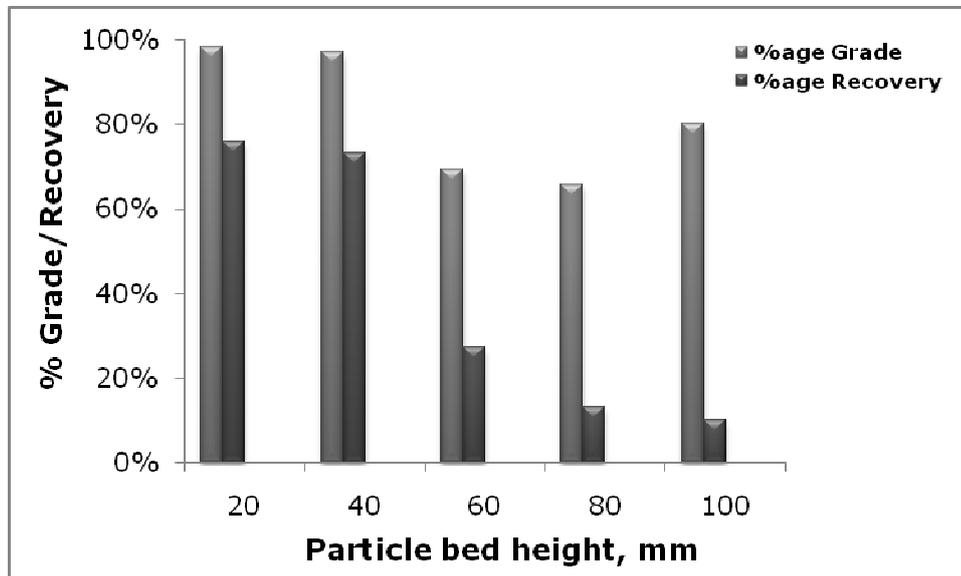


Figure A.12: Grade and recovery of bronze particles from mixture-C in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

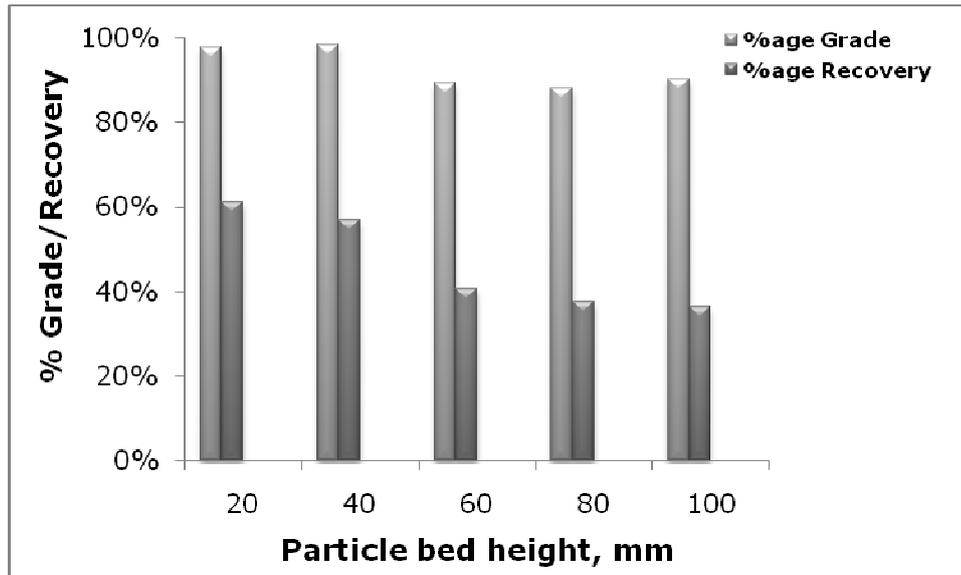


Figure A.13: Grade and recovery of bronze particles from mixture-A in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 10mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

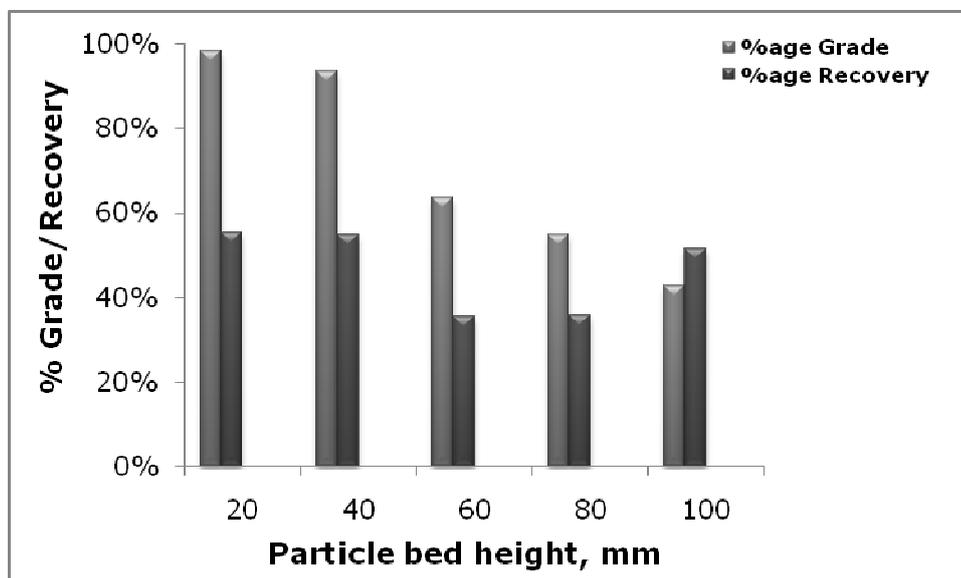


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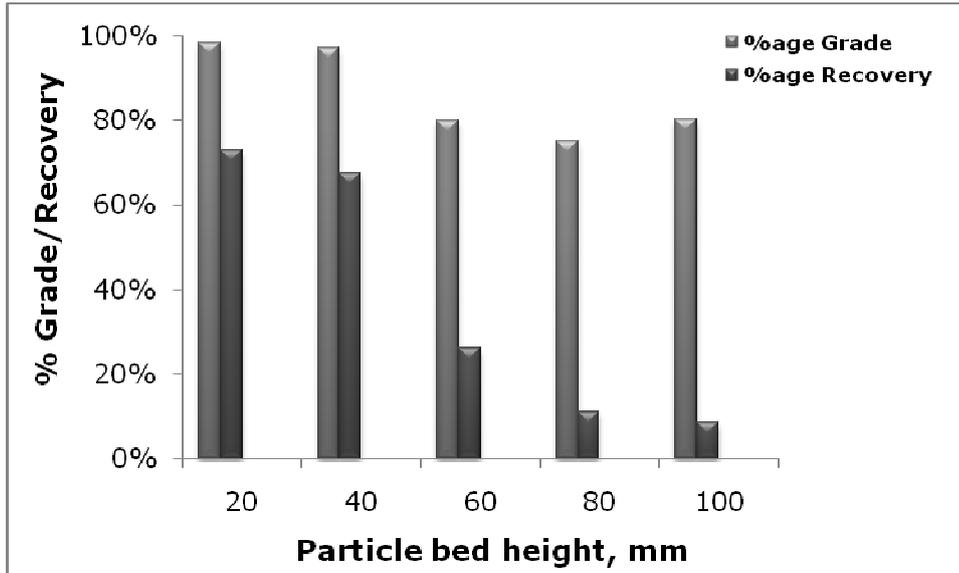


Figure A.15: Grade and recovery of bronze particles from mixture-C in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 10mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

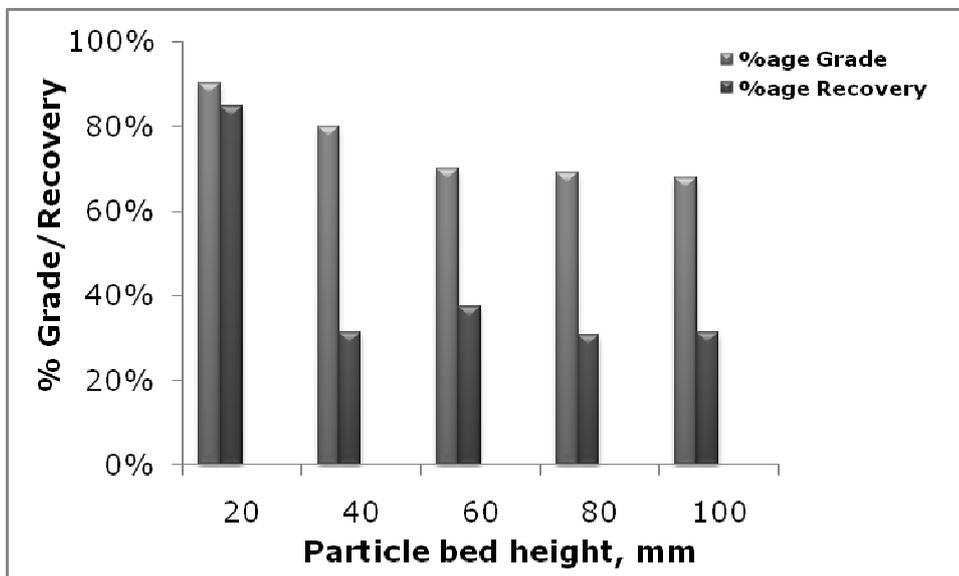


Figure A.16: Grade and recovery of shredded bronze particles from shredded mixture-A in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

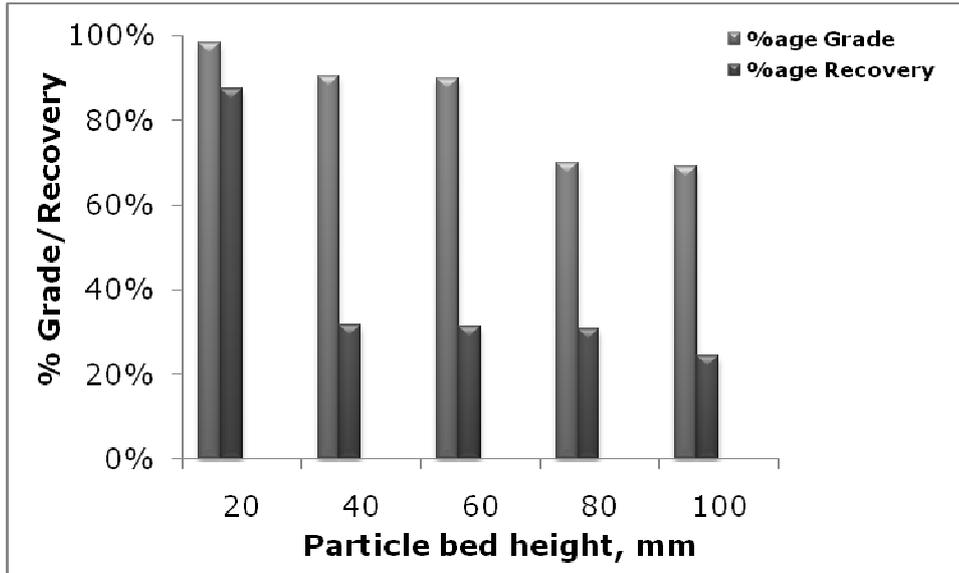


Figure A.17: Grade and recovery of shredded bronze particles from shredded mixture-B in C-1 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).

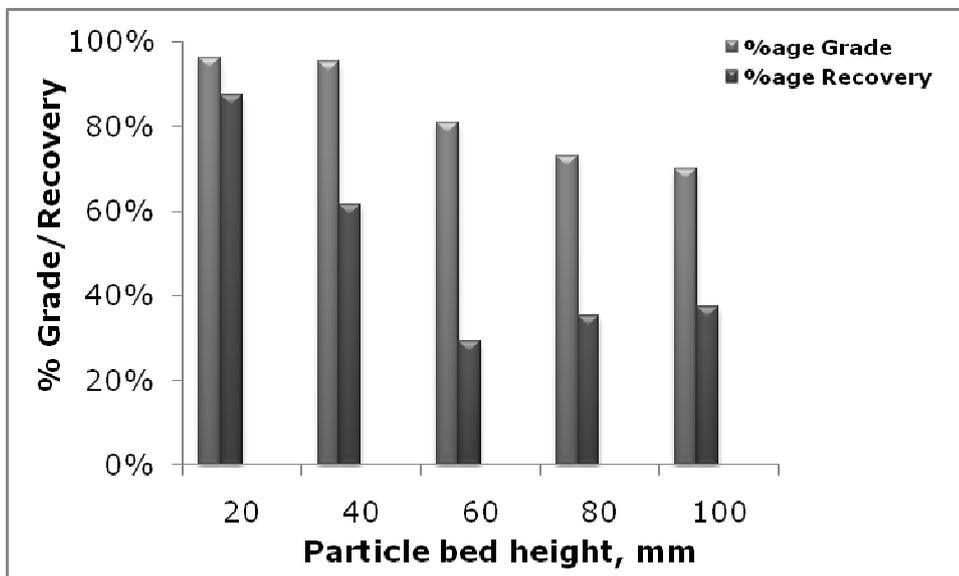


Figure A.18: Grade and recovery of shredded bronze particles from shredded mixture-C in C-1&2 with varying bed heights of 20, 40, 60, 80 and 100mm. (A partition gap size of 5mm and the vertical vibration frequency and dimensionless acceleration magnitudes of $30\pm 10\%$ Hz and $3\pm 10\%$ were used in this work).