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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 930

27 September 2001

Unit Standards for Gazetting by NSB 06 from the Mining and Mineral SGB**METALLURGY (30)****1. Met-G 003 Transfer a fluid by means of a centrifugal pump. (L2 / Cr3)**

- SO. 1 Demonstrate knowledge relating to the transfer of a fluid by means of a centrifugal pump
- SO. 2 Prepare to transfer a fluid
- SO. 3 Transfer a fluid
- SO. 4 Complete the duties pertaining to the transferring of a fluid

2. Met-G 005 Crush material by means of an impact-type crusher. (L3 / Cr5)

- SO. 1 Demonstrate knowledge relating to crushing material
- SO. 2 Prepare to crush material
- SO. 3 Crush material
- SO. 4 Complete the duties pertaining to the crushing process

3. Met-G 011 Separate material by means of a cyclone. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to the separation of material by means of a cyclone
- SO. 2 Prepare to separate material
- SO. 3 Separate material
- SO. 4 Complete duties pertaining to the separation process

4. Met-G 012 Separate material by means of a vibrating screen. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to separating material by means of a vibrating screen
- SO. 2 Prepare to separate material
- SO. 3 Separate material
- SO. 4 Complete duties pertaining to the separation process

5. Met-G 013 Separate liquid from solids by means of a vacuum drum filter. (L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of liquid from solids
- SO. 2 Prepare to separate liquid from solids
- SO. 3 Separate liquid from solids
- SO. 4 Complete duties pertaining to the filtration process

6. Met-G 014 Separate liquid from solids by means of a belt filter. (L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of liquid from solids
- SO. 2 Prepare to separate liquid from solids
- SO. 3 Separate liquid from solids
- SO. 4 Complete duties pertaining to the filtration process

7. Met-G 002 Control feed distribution by means of a mobile system.(L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to the distribution of feed
- SO. 2 Prepare to distribute feed
- SO. 3 Distribute feed
- SO. 4 Complete the duties pertaining to the distribution of feed

8. Met-G 015 Separate liquid from solids by means of a filter press.(L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of liquid from solids
- SO. 2 Prepare to separate liquid from solids
- SO. 3 Separate liquid from solids
- SO. 4 Complete duties pertaining to the filtration process

9. Met-G 016 Separate liquid from solids by means of a pressurised drum filter. (L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of liquid from solids
- SO. 2 Prepare to separate liquid from solids
- SO. 3 Separate liquid from solids
- SO. 4 Complete duties pertaining to the filtration process

10. Met-G 017 Separate liquid from solids by means of a vacuum disc filter. (L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of liquid from solids
- SO. 2 Prepare to separate liquid from solids
- SO. 3 Separate liquid from solids
- SO. 4 Complete duties pertaining to the filtration process

11. Met-G 018 Separate liquid and solids by means of a thickener. (L2 / Cr3)

- SO. 1 Demonstrate knowledge relating to the thickening process
- SO. 2 Prepare to separate liquid and solids
- SO. 3 Separate liquid and solids
- SO. 4 Complete duties pertaining to the thickening process

12. Met-G 019 Reline a mill. (L3 / Cr12)

- SO. 1 Demonstrate knowledge relating to relining a mill
- SO. 2 Determine relining requirements
- SO. 3 Prepare to reline a mill
- SO. 4 Reline a mill
- SO. 5 Complete duties pertaining to the relining process

13. Met-G 020 De-water material by means of a vibrating screen. (L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to de-watering material by means of a vibrating screen
- SO. 2 Prepare to de-water material
- SO. 3 De-water material
- SO. 4 Complete duties pertaining to the de-watering process

14. Met-G 021 Maintain screen decks. (L2 / Cr3)

- SO. 1 Demonstrate knowledge relating to screen deck maintenance
- SO. 2 Prepare to maintain screen deck
- SO. 3 Maintain screen deck
- SO. 4 Complete the duties pertaining to screen deck maintenance

15. Met-G 022 Maintain a cyclone. (L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to cyclone maintenance
- SO. 2 Prepare to maintain a cyclone
- SO. 3 Maintain a cyclone
- SO. 4 Complete the duties pertaining to cyclone maintenance

16. Met-G 023 Maintain belt conveyor components. (L3 / Cr6)

- SO. 1 Demonstrate knowledge relating to belt conveyor components maintenance
- SO. 2 Prepare to maintain belt conveyor components
- SO. 3 Maintain belt conveyor components
- SO. 4 Complete the duties pertaining to belt conveyor components maintenance

17. Met-G 024 Replace conveyor belting. (L3 / Cr6)

- SO. 1 Demonstrate knowledge relating to the replacement of conveyor belting
- SO. 2 Prepare to replace conveyor belting
- SO. 3 Replace conveyor belting
- SO. 4 Complete the duties pertaining to conveyor belting replacement

18. Met-G 027 Separate material by means of a dense medium cyclone. (L3 / Cr6)

- SO. 1 Demonstrate knowledge relating to the separation of material
- SO. 2 Prepare to separate material
- SO. 3 Separate material
- SO. 4 Complete the duties pertaining to the separation process

19. Met-G 028 Separate material by means of a dense medium bath type separator. (L3 / Cr7)

- SO. 1 Demonstrate knowledge relating to the separation of material
- SO. 2 Prepare to separate material
- SO. 3 Separate material
- SO. 4 Complete the duties pertaining to the separation process

20. Met-G 029 Reclaim material by means of a bridge-type reclaimer. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to reclaiming material
- SO. 2 Prepare to reclaim material
- SO. 3 Reclaim material
- SO. 4 Complete the duties pertaining to the reclamation process

21. Met-G 040 Regenerate resin. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to resin regeneration
- SO. 2 Prepare to regenerate resin
- SO. 3 Regenerate resin
- SO. 4 Complete duties pertaining to the regeneration process

22. Met-G 041 Maintain the paste level in an electrode casing. (L2 / Cr1)

- SO. 1 Demonstrate knowledge relating to maintaining the paste level
- SO. 2 Prepare to maintain paste level
- SO. 3 Maintain paste level
- SO. 4 Complete the duties pertaining to the maintenance process

23. Met-G 042 Load a charge larger than 10 tons into an electric arc furnace. (L3 / Cr7)

- SO. 1 Demonstrate knowledge relating to the charging of the furnace
- SO. 2 Prepare to charge furnace
- SO. 3 Charge the furnace
- SO. 4 Complete the duties pertaining to the charging process

24. Met-G 043 Tap material from an arc furnace by means of a mud gun. (L2 / Cr6)

- SO. 1 Demonstrate knowledge relating to tapping material by means of a mud gun
- SO. 2 Prepare to tap material
- SO. 3 Tap material
- SO. 4 Complete the duties pertaining to the tapping process

25. Met-G 044 Tap material from an arc furnace by means of lancing. (L2 / Cr3)

- SO. 1 Demonstrate knowledge relating to the tapping of material by means of lancing
- SO. 2 Prepare to tap material
- SO. 3 Tap material
- SO. 4 Complete duties pertaining to the tapping process

26. Met-G 045 Concentrate metal bearing liquor by means of an evaporator. (L1 / Cr2)

- SO. 1 Demonstrate knowledge relating to the concentration of metal bearing liquor
- SO. 2 Prepare to concentrate liquor
- SO. 3 Concentrate liquor
- SO. 4 Complete the duties pertaining to the liquor concentration process

27. Met-G 047 Recover gold from solution by means of chemical precipitation. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to the recovery of gold from solution by means of precipitation
- SO. 2 Prepare to precipitate gold
- SO. 3 Precipitate gold
- SO. 4 Complete the duties pertaining to the precipitation process

28. Met-G 046 Extract a metal from a solution by means of solvent extraction. (L3 / Cr5)

- SO. 1 Demonstrate knowledge relating to the extraction of a metal from a solution
- SO. 2 Prepare to extract metal
- SO. 3 Extract a metal
- SO. 4 Complete the duties pertaining to the metal extraction process

29. Met-G 048 Produce bullion by means of a furnace. (L3 / Cr5)

- SO. 1 Demonstrate knowledge relating to bullion production
- SO. 2 Prepare to produce bullion
- SO. 3 Produce bullion
- SO. 4 Complete the duties pertaining to the bullion production process

30. Met-G 049 Calcine metal bearing concentrate. (L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to the calcining of concentrate
- SO. 2 Prepare to calcine concentrate
- SO. 3 Calcine concentrate
- SO. 4 Complete the duties pertaining to the calcining process

UNDERGROUND HARDROCK MINING (17)

31. MnH-G 064 Start and take control of a winder. (L3 / Cr19)

- SO. 1 Explain the specified requirements pertaining to the starting and taking control of a winder.
- SO. 2 Prepare to start and take control of winder.
- SO. 3 Start and take control of winder.

32. MnH-G 063 Position conveyances in a shaft by means of clutching. (L3 / Cr11)

- SO. 1 Explain the specified requirements regarding the clutching of a winder.
- SO. 2 Prepare to clutch a winder.
- SO. 3 Clutch winder

33. MnH-G 100 Transfer broken rock by means of an electrical-powered Load Haul Dumper (LHD) in an underground mine. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the transfer of broken rock by means of an electrical powered Load Haul Dumper.
- SO. 2 Prepare to transfer broken rock with an electrical powered Load Haul Dumper.
- SO. 3 Transfer broken rock with an electrical powered Load Haul Dumper.

34. MnH-G 101 Transfer broken rock by means of a diesel-powered Load Haul Dumper (LHD) in an underground mine. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the transfer of broken rock by means of a diesel powered Load Haul Dumper.
- SO. 2 Prepare to transfer broken rock with a diesel powered Load Haul Dumper.
- SO. 3 Transfer broken rock with a diesel powered Load Haul Dumper.

35. MnH-G 102 Transport broken rock by means of a diesel-powered Dump Truck in an underground mine. (L2 / Cr3)

- SO. 1 Explain the specified requirements pertaining to the transfer of broken rock by means of a diesel-powered Dump Truck.
- SO. 2 Prepare to transfer broken rock with a diesel-powered dump truck
- SO. 3 Transfer broken rock with a diesel-powered dump truck.

36. MnH-G 103 Transfer broken rock by means of a remote-controlled Load Haul Dumper (LHD) in an underground mine. (L2 / Cr8)

- SO. 1 Explain the specified requirements pertaining to the transfer of broken rock by means of a remote-controlled Load Haul Dumper.
- SO. 2 Prepare the remote-controlled Load Haul Dumper for transferring broken rock.
- SO. 3 Transfer broken rock with a remote-controlled Load Haul Dumper.

37. MnH-G 104 Transport persons, material, equipment and explosives by means of fixed saddle utility vehicle in an underground mine. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the transportation of persons, material, equipment and explosives.
- SO. 2 Prepare the utility vehicle for transporting.
- SO. 3 Perform transport duties

38. MnH-G 105 Transport persons, material, equipment and explosives by means of a light delivery vehicle (LDV) in an underground mine. (L2 / Cr2)

- SO. 1 Explain the specified requirements pertaining to the transportation of persons, material, equipment and explosives.
- SO. 2 Prepare the LDV for transporting.
- SO. 3 Perform transport duties

39. MnH-G 106 Transport persons, material, equipment and explosives by means of an interchangeable-saddle utility vehicle in an underground mine. (L2 / Cr3)

- SO.1 Explain the specified requirements pertaining to the transportation of persons, material, equipment and explosives.
- SO. 2 Prepare the interchangeable-saddle utility vehicle for transporting and handling of cassettes.
- SO. 3 Perform transport duties

40. MnH-G 107 Lift and move material and equipment by means of a forklift. (L2 / Cr3)

- SO. 1 Explain the specified requirements pertaining to lifting, securing, transferring and positioning of loads.
- SO. 2 Prepare the forklift for lifting, securing, transferring and positioning of loads
- SO. 3 Operate the forklift.

41. MnH-G 012 Remove broken rock by means of a suction unit. (L2 / Cr4)

- SO. 1 Explain specified requirements pertaining to the removal of broken rock with a suction unit.
- SO. 2 Prepare to remove broken rock with a suction unit.
- SO. 3 Remove broken rock with a suction unit.

42. MnH-G 018 Support an underground work place by means of wire mesh and lacing. (L2 / Cr4)

- SO. 1 Explain specified requirements pertaining to wire mesh and lacing.
- SO. 2 Prepare to install wire mesh and lacing.
- SO. 3 Install wire mesh and lacing.

43. MnH-G 019 Support an underground work place by means of backfilling. (L2 / Cr4)

- SO. 1 Explain specified requirements pertaining to backfilling.
- SO. 2 Prepare to backfill.
- SO. 3 Backfill area.

44. MnH-G 020 Support an underground working place by means of cementitious grouted rods. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the installation of cementitious grouted rods.
- SO. 2 Prepare to install cementitious grouted rods.
- SO. 3 Install cementitious grouted rods.

45. MnH-G 001 (ons) Sling material into a shaft. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the slinging of material into a shaft.
- SO. 2 Prepare to sling material into a shaft.
- SO. 3 Sling material into a shaft.

46. MnH-G 002 (ons) Remove slung material from a shaft. (L2 / Cr4)

- SO. 1 Explain specified requirements pertaining to the removal of slung material from a shaft.
- SO. 2 Prepare to remove slung material from a shaft.
- SO. 3 Remove slung material from shaft.

47. MnH-G 003 (ons) Load and unload persons into and from a shaft conveyance. (L2 / Cr4)

- SO. 1 Explain the specified requirements pertaining to the conveyance of persons in a shaft.
- SO. 2 Prepare to load and unload persons into and from a conveyance.
- SO. 3 Load and unload persons into and from a conveyance.

48. MnH-G 004(ons) Loading of long material into a shaft conveyance

- SO1 Explain specified requirements for loading long material into a shaft conveyance;
- SO 2 Prepare to load long material into a shaft conveyance; and
- SO 3 Load long material into a shaft conveyance.

UNDERGROUND COAL (17)**49. MnC-G 001 Cut and load a coal face using continuous mining equipment in an underground coal mine. (L3 / Cr28)**

- SO. 1 Prepare to cut a coal face.
- SO. 2 Cut a coal face.
- SO. 3 Shut down the cutting operation and prepare for following shift.
- SO. 4 Demonstrate teamwork.

50. MnC-G 002 Test and monitor for basic gases in an underground coal mine. (L2 / Cr7)

- SO. 1 Prepare to test and monitor for gas.
- SO. 2 Test and monitor for gas.

51. MnC-G 003 Support roof using a roofbolter in an underground coal mine. (L2 / Cr13)

- SO. 1 Prepare to support roof.
- SO. 2 Support roof.
- SO. 3 Shut down the roofbolting operation and prepare for following shift.
- SO. 4 Demonstrate teamwork.

52. MnC-G 004 Sound and bar down roof and side walls using sounding and barring equipment in an underground coal mine. (L2 / Cr4)

- SO. 1 Prepare to sound and bar roof and side walls.
- SO. 2 Bar and sound roof and side walls.

53. MnC-G 008 Conduct statutory examinations in a production section in an underground coal mine. (L3 / Cr3)

- SO. 1 Prepare to conduct a statutory examination.
- SO. 2 Conduct statutory examination.
- SO. 3 Demonstrate teamwork.

54. MnC-G 010 Test, monitor and control the common mine gases in an underground coal mine. (L3 / Cr5)

- SO. 1 Prepare to test, monitor and control the common mine gases.
- SO. 2 Test, monitor and control the common mine gases.
- SO. 3 Demonstrate teamwork.

55. MnC-G 011 Ventilate a production section to control gases and dust in an underground coal mine. (L2 / Cr5)

- SO. 1 Prepare to ventilate a production section.
- SO. 2 Ventilate a production section.
- SO. 3 Demonstrate teamwork

56. MnC-G 019 Feed and break coal using a feeder breaker in an underground coal mine. (L1/ Cr3)

- SO. 1 Prepare to feed and break coal.
- SO. 2 Feed and break coal.
- SO. 3 Close down the feeder breaker operation and prepare for following shift.
- SO. 4 Demonstrate teamwork.

57. MnC-G 020 Conduct visual inspection of flameproof equipment in an underground coal mine. (L1 / Cr2)

- SO. 1 Prepare to visually inspect flameproof equipment.
- SO. 2 Visually inspect flameproof equipment

58. MnC- G 024 Drill a work face using self propelled drilling equipment in an underground coal mine. (L2 / Cr8)

- SO. 1 Prepare to drill a work face.
- SO. 2 Drill work a face.
- SO. 3 Shut down self propelled drilling equipment and prepare for following shift.
- SO. 4 Demonstrate teamwork

59. MnC-G 025 Drill a work face using hand held drilling equipment in an underground coal mine. (L2/ Cr4)

- SO. 1 Prepare to drill a work face.
- SO. 2 Drill work a face.
- SO. 3 Shut down hand held drilling equipment and prepare for following shift.
- SO. 4 Demonstrate teamwork.

60. MnC-G 027 Cut a coal face using a arc wall type coal cutter in an underground coal mine. (L2 / Cr4)

- SO. 1 Prepare to cut a coal face.
- SO. 2 Cut a coal face.
- SO. 3 Shut down the coal cutting operation and prepare for following shift.
- SO. 4 Demonstrate teamwork.

61. MnC-G 030 Control dust in a production section in an underground coal mine. (L3 / Cr5)

- SO. 1 Prepare to control dust in a production section.
- SO. 2 Control dust in a production section.
- SO. 3 Demonstrate teamwork

62. MnC-G 031 Demonstrate knowledge and ability to work in an underground coal mine. (L1 / Cr8)

- SO. 1 Explain the requirements of the relevant aspects of the Mine Health and Safety Act.
- SO. 2 Demonstrate understanding of the lamp room procedure.
- SO. 3 Demonstrate understanding of emergency procedures.
- SO. 4 Demonstrate an awareness of strata control.
- SO. 5 Demonstrate an awareness of ventilation standards

63. MnC-G 044 Control operations in a continuous miner section in an underground coal mine. (L3 / Cr8)

- SO. 1 Prepare to control operations in a continuous miner section.
- SO. 2 Control operations in a continuous miner section.
- SO. 3 Demonstrate teamwork.

64. MnC-G 005 Demonstrate an understanding of the prevention of flammable gas ignition through the use of flame proofing in an underground coal mine. (L2/ Cr5)

- SO. 1 Explain diesel engine flame proofing requirements.
- SO. 2 Explain electrical flame proofing requirements.
- SO. 3 Explain general flame proofing requirements

65. MnC-G 026 Cut a coal face using a universal type coal cutter in an underground coal mine. (L2 / Cr13)

- SO. 1 Prepare to cut a coal face.
- SO. 2 Cut a coal face.
- SO. 3 Shut down the coal cutting operation and prepare for following shift.
- SO. 4 Demonstrate teamwork.

ASSAYING (14)**66. Ass-G 001 Take representative samples of slurries and liquids in a metallurgical process. (L2 / Cr4)**

- SO. 1 Demonstrate knowledge relating to the taking of representative slurry and liquid samples in a metallurgical process
- SO. 2 Prepare to take representative samples
- SO. 3 Take representative samples

67. Ass-G 002 Determine the mass of a substance. (L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to the determination of mass.
- SO. 2 Determine the mass of substance.

68. Ass-G 003 Perform measurements using volumetric equipment. (L2 / Cr2)

- SO. 1 Demonstrate knowledge relating to volumetric equipment
- SO. 2 Perform volumetric measurements

69. Ass-G 004 Perform titrimetric analysis. (L4 / Cr3)

- SO. 1 Prepare for titrimetric analysis.
- SO. 2 Perform the titrimetric analysis.

70. Ass-G 007 Determine the gold fineness of gold bullion by the re-inquartation and parting procedure. (L3 / Cr4)

- SO. 1 Demonstrate knowledge relating to gold bullion analysis
- SO. 2 Prepare for the gold bullion analysis
- SO. 3 Determine the gold bullion fineness

71. Ass-G 008 Determine the ash fusion temperature. (L2 / Cr3)

- SO. 1 Demonstrate knowledge relating to the ash fusion temperature.
- SO. 2 Prepare for the ash fusion temperature determination.
- SO. 3 Perform the ash fusion temperature determination

72. Ass-G 015 Quantify analyte concentrations in prepared samples by means of Flame Atomic Absorption Spectroscopy. (L3 / Cr11)

- SO. 1 Demonstrate knowledge relating to Flame Atomic Absorption Spectroscopy.
- SO. 2 Quantify analyte concentrations in prepared samples

73. Ass-G 026 Determine the plastic properties of coal by means of a plastometer. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to plasticity determinations.
- SO. 2 Perform the plasticity determination.

74. Ass-G 027 Determine the dilatometric behaviour of coal by means of a dilatometer. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to dilatation determinations.
- SO. 2 Perform the dilatation determination.

75. Ass-G 028 Quantify the coking ability of coal by means of the crucible swelling number and roga index determinations. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to coking ability determinations.
- SO. 2 Perform the crucible swelling number determination.
- SO. 3 Perform the Roga test

76. Ass-G 029 Prepare analytical samples from a slurry. (L2 / Cr4)

- SO. 1 Separate the slurry products by means of filtration.
- SO. 2 Prepare the filtration products for analysis.

77. Ass-G 042 Take a representative sample of solid material in a metallurgical process. (L2 / Cr4)

- SO. 1 Demonstrate knowledge relating to the taking of representative solid samples in a metallurgical process
- SO. 2 Prepare to take representative samples
- SO. 3 Take representative samples

78. Ass-G 043 Determine the pH of a liquid by means of a pH meter. (L3 / cr2)

- SO. 1 Demonstrate knowledge relating to pH determinations
- SO. 2 Determine the pH of a liquid

79. Ass-G 044 Determine the conductance of a liquid by means of a Conductivity meter. (L3 / Cr2)

- SO. 1 Demonstrate knowledge relating to pH determinations
- SO. 2 Determine the pH of a liquid

JEWELLERY MANUFACTURING (13)**80. Jwl-G 017 Set stones in multiple claw or wire settings. (L4/ Cr12)**

- SO. 1 Prepare to set stones and other organic materials in multiple claw settings.
- SO. 2 Prepare to set stones and other organic materials in wire settings.
- SO. 3 Set stones and other organic materials in multiple claw and wire settings.
- SO. 4 Execute the specified finish.

81. Jwl-G 009 Assemble prepared jewellery components without applying heat. (L3 / Cr19)

- SO. 1 Rivet prepared jewellery components.
- SO. 2 Link prepared jewellery components.
- SO. 3 Bond prepared jewellery components. Solder

82. Jwl-G 015 Describe and manage the lost wax casting process. (L4 / Cr24)

- SO. 1 Identify technical problems after casting.
- SO. 2 Assess and initiate corrective action to resolve casting flaws.
- SO. 3 Deliver casts within a predetermined time.

83. Jwl-G 016 Produce wax models for lost wax casting. (L2 / Cr3)

- SO. 1 Inject or pour wax into a mould.
- SO. 2 Extract a wax pattern from the mould.
- SO. 3 Gate, sprue, build a tree and prepare for investing.

84. Jwl-G 018 Set faceted stones in multiple tube settings. (L4 / Cr12)

- SO. 1 Prepare to set stones and other organic materials in multiple tube settings.
- SO. 2 Set stones and other organic materials in multiple tube settings.
- SO. 3 Execute the specified finish.

85. Jwl-G 019 Set faceted stones in channel settings. (L4 / Cr18)

- SO. 1 Prepare channel to set stones
- SO. 2 Channel-set stones
- SO. 3 Execute the specified finish

86. Jwl-G 020 Tension set a single faceted stone. (L4 / Cr2)

- SO. 1 Prepare to tension set a stone
- SO. 2 Tension set the stone
- SO. 3 Execute the specified finish

87. Jwl-G 021 Flush-set faceted stones. (L4 / Cr15)

- SO. 1 Prepare to flush set stones.
- SO. 2 Flush set stones.
- SO. 1 Execute the specified finish

88. Jwl-G 022 Pave- and star-set faceted stones. (L4/ Cr14)

- SO. 1 Prepare to pave-set stones.
- SO. 2 Prepare to star-set stones.
- SO. 3 Pave and star-set stones.
- SO. 4 Execute the specified finish.

89. Jwl-G 023 Draw and design jewellery. (L3 / Cr8)

- SO. 1 Interpret design requirements
- SO. 2 Provide a design solution
- SO. 3 Render the design to facilitate production

90. Jwl-G 026 Manufacture jewellery for single faceted stone settings. (L3 / Cr21)

- SO. 1 Make a piece of jewellery for a single stone tube setting
- SO. 2 Make a piece of jewellery for a single stone claw setting
- SO. 3 Make a piece of jewellery for a single stone bead setting

91. Jwl-G 030 Demonstrate appropriate product knowledge to enable working in a jewellery environment. (L3 / Cr11)

- SO. 1 Identify the various categories of merchandise.
- SO. 2 Identify various precious metals and their simulants.
- SO. 3 Demonstrate basic gem recognition.
- SO. 4 Identify jewellery manufacturing processes

92. Jwl-G 001 Introduction to the jewellery workshop. (L2 / Cr25)

- SO. 1 Identify, use and maintain common hand tools and equipment.
- SO. 2 Identify, use and maintain power tools and equipment.
- SO. 3 Identify, use, maintain and store chemicals, gasses and gas installations.
- SO. 4 Understand, describe and demonstrate workshop housekeeping

93. Jwl-G 002 Manufacture non-ferrous and precious metal sheet and bar from granules. (L2 / Cr7)

- SO. 1 Melt metal in a crucible and pour into an ingot.
- SO. 2 Roll metal from cast plate or bar to specifications.
- SO. 3 Identify potential hazards when melting and rolling metal

ROCK ENGINEERING (7)**94. RoC-G 025 Perform geotechnical core logging and sampling in a localised known environment to provide data for mining excavation design. (L4 / Cr8)**

- SO. 1 Demonstrate knowledge of geotechnical core logging
- SO. 2 Prepare for geotechnical logging
- SO. 3 Conduct geotechnical logging
- SO. 4 Select, secure and mark samples for laboratory testing
- SO. 5 Compile and process logging data

95. RoC-G 026 Perform geotechnical mapping and sampling in a localised known environment to provide data for mining excavation design. (L4 / Cr8)

- SO. 1 Demonstrate knowledge of geotechnical mapping
- SO. 2 Prepare for geotechnical mapping
- SO. 3 Conduct geotechnical mapping
- SO. 4 Select, mark and secure samples for laboratory testing
- SO. 5 Compile and process the mapping data

96. RoC-G 032 Acquire an appreciation for the role of rock engineering in the mining process. (L1 / Cr3)

- SO.1 Demonstrate knowledge of the geotechnical environment in which mining operations are performed;
- SO. 2 Describe the effect of mining operations on the geotechnical environment;
- SO. 3 Explain the rock engineering practices currently available to promote a safe, productive and profitable mining environment.

97. RoC-P 004 Perform geotechnical mapping and sampling in a range of geotechnical areas to provide data for mining excavation design. (L6 / Cr10)

- SO. 1 Demonstrate knowledge of geotechnical mapping
- SO. 2 Prepare for geotechnical mapping
- SO. 3 Conduct geotechnical mapping

- SO. 4 Select, mark and secure samples for laboratory testing
- SO. 5 Compile and process the mapping data

98. RoC-P 005 Derive material properties for rock engineering design purposes from laboratory tests. (L5 / Cr48)

- SO. 1 Demonstrate knowledge of specified requirements for materials testing in a laboratory
- SO. 2 Prepare to test a sample
- SO. 3 Perform the test
- SO. 4 Process the data and compile a report

99. RoC-P 032 Devise instrumentation and monitoring programs to determine geotechnical rock mass characteristic behaviour for excavation design purposes. (L6 / Cr10)

- SO. 1 Demonstrate knowledge of instrumentation and monitoring needs, and methods.
- SO. 2 Identify the need for a specific instrumentation and measurement program relative to the expected rock mass characteristic behaviour.
- SO. 3 Design and plan instrumentation and measurement programmes.
- SO. 4 Obtain client acceptance for instrumentation and monitoring programmes.

100. RoC-P 035 Analyse and interpret data from a geotechnical monitoring programme. (L6 / Cr40)

- SO. 1 Demonstrate knowledge of mathematical and statistical methods to select, filter and analyse data
- SO. 2 Demonstrate knowledge of methods to set criteria for analysis of data
- SO. 3 Demonstrate proficiency in data analysis and interpretation
- SO. 4 Demonstrate knowledge of the integration of data interpretation with geotechnical objectives

No. 931

27 September 2001

PUBLIC NOTICE BY NSB 06, MANUFACTURING, ENGINEERING AND TECHNOLOGY TO EXTEND THE BRIEF OF THE STANDARDS GENERATING BODY FOR FOOD MANUFACTURING FROM NQF LEVELS 1 - 8

National Standards Body (NSB 06) – Manufacturing, Engineering and Technology hereby extends the brief of the Food Manufacturing SGB in the sub-field of Manufacturing and Assembly from NQF levels 1 – 8.

PROPOSED BRIEF

1. Develop learning pathways for potential qualifications and unit standards in the sub-field Manufacturing and Assembly from level 1 through to level 8. *[Regulation 24 (1)(e)].*
2. Generate the following unit standards-based qualifications and qualifications in accordance with Authority requirements for the NQF levels 1 through to 8, in the areas of food processing packaging and manufacturing. *[Regulation 24 (1)(a)].*
 - ◆ National Certificate in Food Processing (NQF level 2)
 - ◆ National Certificate in Food Packaging (NQF level 3)
 - ◆ National Certificate in Manufacturing Techniques (NQF level 4)
 - ◆ National Diplomas, National First Degrees, Masters Degrees and Doctoral Degrees at NQF levels 5 to 8 in Food Processing, Food Packaging and Food Manufacturing Techniques
 - ◆ National Certificate in Food and Beverage Process Artisan (NQF level 4)
 - ◆ National Certificate in Food and Beverage Process Technician (NQF level 4)
 - ◆ National Certificate in Food and Beverage Manufacturing Supervision (NQF level 4)
 - ◆ National Certificate in Food and Beverage Manufacturing Management (NQF level 6)
3. Recommend the standards and qualifications generated under 2 to the NSB. *[Regulation 24 (1)(c)].*
4. Recommend criteria for the registration of assessors and moderators or moderating bodies. *[Regulation 24 (1)(d)].*
5. Review these qualifications and unit standards and effect the necessary changes. *[Regulation 24 (1)(b)].*
6. Maintain liaison, during the process of developing standards and qualifications, with other related Standards Generating Bodies as and when directed by NSB 06. *[Regulation 24 (1)(e)].*

PROPOSED COMPOSITION OF THE SGB

Nominee	Workplace	Nominating Body	Experience / Qualifications
Abdul Kader S.	Tiger Brands	Tiger Brands	B Sc.: Microbiology and Chemistry Diploma in Quality Management. 3 years in first-line management 5 years national technical training and development manager.
Bezuidenhout D.	Beacon	Tiger Brands	Masters in Industrial Psychology and Development Masters in Educational Psychology 6 years Human Resource Manager.
Maake D.	DoL Project 3	Department of Labour	Higher Education Diploma 4 years SMME training and development 2 years Learnership development.
Fredericks L.	Kellogs	Kellogs	National Diploma in Food Technology B. Tech. In Food Technology 7 years production manager 3 years as training officer.
Ndlovu A.	Simba	Simba	B. Administration Organisational Management and Development Officer.
Eloff K	Foodbev. SETA	Foodbev. SETA	Higher Education Diploma (HED) 4 years National Accreditation Officer Manager Food and Beverage. SETA

Cassim Y.	ML Sultan Technikon	ML Sultan Technikon	NHD: Food technology NHD: Posy School Education 10 years Industrial Experience in food quality control and assurance 18 years lecturing experience.
Plaatjies C.	Food and Allied Workers Union	Food and Allied Workers Union	6 years factory supervisor 2 years Director (Union Alliance Holding) 2 years Director (FAWU Investment Company).
Dolley L.	Peninsula Technikon	Peninsula Technikon	M. Sc. In Food Science and Technology 20 years tertiary teaching in Food Science and Technology.
Maharaj A.	NCP	NCP	M. Tech. in Biotechnology 5 years senior Laboratory Technician 6 years production shift supervisor 2 years laboratory supervisor.
Van Der Walt	Robertson's Foods	Robertson's Foods	National Technical Certificate in food. Certificate in fitting and Turning 4 years National Operations Training Manager.
Zondag I.	ARC animal Nutrition and Animal Products Research	ARC Animal Nutrition and Animal Research Product.	B.Sc. Home Economics Higher Education Diploma(HED) PhD Food Science and Human Nutrition 4 years Adult Educationist 8 years Lecturer 16 years Agricultural Research.

Vlok N.	Cape Technikon	Cape Technikon	NHD Food Technology NHD Microbiology M.Tech. Food Technology 13 years Lecturing at Technikon.
Stewart V.	Nestle	Nestle	BA Communications & Home Economics BA Hons Psychology Diploma Small Business Management 3 years Human Resource and Development Consultant.
Jordan C.	Cadbury	Cadbury	BA Hons Industrial Psychology 2 years Project Manager 5 years Unit HR Manager. 5 years General HR Training Experience.
Van Schalkwyk E.	Dairy Foundation	Dairy SGB	B Sc. (Agriculture) Food Science. 10 dairy skills development and assessment.
Odhav B.	ML Sultan Technikon	ML Sultan Technikon	PhD Food Technology 15 years lecturing experience 5 years post graduate research.
Davis M.	Business Unit: Natal Technikon	Beverage SGB	Masters: Business Administration (MBA) Masters: Business Practice (MBP) Higher Education Diploma (HED) 10 years lecturing experience 2 years Director of Business School 4 years Service provider to the Beverage Industry

Hansman C.	ARC Infruitec	ARC Infruitech	M. Sc. Food Science and Technology 30 years Research (Processing & Value-adding: fruit & Vegetables).
Joseph A.	Tiger Brands	Tiger Brands	B. Tech. Mechanical Engineering 2 years Production Management. 2 years International Process Engineering 1 year technical Training and Skills development.
Korff H.	Enterprise	Enterprise	B.A: Industrial Psychology Hons. B. Admin 2 years: Director Human Resource.
Giba L.	Food and Allied Workers Union	Food and Allied Workers Union	Training and Development Certificate Certificate in Human Resource Management Regional Educator Free State and Northern Cape.
Van der Merwe	Unilever	Unifoods	Masters in Counselling Psychology Diploma: Project Management 7 years Training and Development.
Mashasha M.	National Union of Food Beverage Wine Spirits and Allied Workers.	National Union of Food Beverage Wine Spirits and Allied Workers	Diploma: Industrial Relations. 7 years NUFBWSAW Regional Organiser.
Erasmus M.	Nabisco	Nabisco	B. Comm; Hons in Industrial Psychology. 3 years organisational Development Manager. 3 years HR Practitioner.

No. 932

27 September 2001

**PUBLIC NOTICE BY NSB 12, PHYSICAL PLANNING AND CONSTRUCTION,
REGISTERS AN SGB FOR BUILDING CONSTRUCTION**

NSB 12 hereby registers an SGB for Building Construction under the sub-field of Building Construction for a period of three years from 06 September 2001 until 05 September 2004.

BRIEF OF THE SGB

1. Identify transformation, development and equity issues relevant to the sub-field Building Construction from NQF level 1 to 8, and develop mechanisms to include these issues within qualifications as envisaged in 2 below [Regulation 24(1)(e)].
2. Generate the qualifications in accordance with Authority requirements [Regulation 24(1)(a)]:
 - National Certificate in Plumbing – level 3
 - National Certificate in Painting and Decorating – level 3
 - National Certificate in Plastering and Tiling – level 3
 - National Certificate in Shopfitting – level 3
 - National Certificate in Joiner Woodmachining – level 3
 - National Certificate in Bricklaying / Plastering – level 3
 - National Certificate in Bricklaying – level 3
 - National Certificate in Carpentry – level 3
 - National Certificate in House Building – level 2
 - National Certificate in Small Construction Contracting – levels 2, 3 and 4
 - National Certificate in Construction Supervising – level 4
 - National Diploma in Construction Management – level 5
 - National Degrees in Construction Management – levels 6, 7 and 8
 - National Certificates in Traditional Building – levels 1, 2 and 3
 - National Certificates in Construction Material Manufacturing and Supplying – levels 2, 3 and 4
 - National Diploma in Construction Material Manufacturing and Supplying – level 5
 - National Degrees in Construction Material Manufacturing and Supplying – levels 6, 7 and 8
3. Liaise with all other SGBs in the field whose briefs mandate them to generate Building Construction qualifications [Regulation 24(1)(a) & (e)].
4. Recommend the qualifications generated in 2 above to National Standards Body 12 [Regulation 24(1)(c)].
5. Recommend criteria for the registration of assessors and moderators or moderating bodies [Regulation 24(1)(d)].
6. Perform such other related functions as may from time to time be delegated by NSB 12 [Regulation 24(1)(e)].

COMPOSITION OF THE SGB

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE / QUALIFICATIONS
Borman, J	Construction Education & Training Authority (CETA)	Construction Education & Training Authority (CETA)	B A, ex BITB, Building Ind from 1969
Davies, R	Noordelike Bouwerkersvakbond	Noordelike Bouwerkersvakbond	Ad. Tech. Certificate, Gauteng Building bargaining Council
De Kock, C	Master Builders Association – Gauteng (MBA – GP)	Master Builders Association – Gauteng (MBA – GP)	B Sc., CETA Board, Ex. Dir-GMBA, BIFSA
Elton, C	Assessment College of South Africa	National Forum for Independent Providers of Education & Training Development INPROV	Dip. Accounting, SMME projects, Construction sub-contracting
Gcabashe, D	Construction Education & Training Authority (CETA)	Construction Education & Training Authority (CETA)	B Sc Economics, Construction related research
Hlabioa, L	Consultant	Department of Labour – Consultant / Contractor (DoL)	B A, ILO – Contracting Entrepreneurial training
Jordan, M	Institute of Plumbing South Africa (IOPSA)	Institute of Plumbing South Africa (IOPSA)	Building Ind since 1970, Past Chairperson of associations
Kraukamp, F	Clay brick Association	Clay brick Association	Nat. Technical Dip., Nat. Teachers Dip., Dir. Claybrick Association
Laubscher, M	Consultant	Civil Construction SGB	B Sc Civil Eng., ILO projects
Marais, A	South African Bureau of Standards (SABS)	South African Bureau of Standards (SABS)	B. Tech, SABS
Massyn, M	South African Institute of Building (SAIB)	South African Institute of Building (SAIB)	B Sc., SAIB, Task group for CIDB, IAPMC
Mpe, J	Building Construction & Allied Workers Union (BCAWU)	Building Construction & Allied Workers Union (BCAWU)	Dip. IR, Accredited Comm with CCMA, CETA-ETQA comm.
Sethosa, L	Department of Housing	Department of Housing	B A, Univ. Dip. In Education, Housing SGB
Smallwood, J	University of Port Elizabeth	University of Port Elizabeth	Professor, SAIB, extensive construction related research
Strydom, G	Edstan & Son (PTY) LTD	Master Builders Association – KZN (MBA – KZN)	B Sc. QS, KZN-MBA, CETA Board, ASAQS

Uys, M	South African Federation of Civil Engineering Contractors (SAFCEC)	South African Federation of Civil Engineering Contractors (SAFCEC)	B.Juris, BA(Hons), HR-SAFCEC, GMBA
Van Niekerk, L	Western Province Technical College	Western Province Technical College	MBA, B. Ed, Tech College Rector
Vermaak, X	South African Women in Construction (SAWIC)	South African Women in Construction (SAWIC)	40 years building experience
Wilgenbus, H	Consultant – Self Employed	Refractories Contractors Association (REFCA)	Pr Eng., CETA Board, Civil Const. SGB

No. 933

27 September 2001

PUBLIC NOTICE BY NSB 12, PHYSICAL PLANNING AND CONSTRUCTION, REGISTERS AN SGB FOR THE WATER SECTOR

NSB 12, Physical Planning and Construction, hereby registers an SGB for the Water Sector under the Physical Planning, Design and Management sub-field for a period of three years from 06 September 2001 until 05 September 2004.

BRIEF OF THE SGB

1. Identify transformation, development and equity issues relevant to the sub-field Physical Planning, Design and Management in the NQF organising field 12 and develop mechanisms to include these issues within qualifications as envisaged in 2 below [Regulation 24(1)(e)].
2. Generate the following unit standards-based qualifications (level 4 to 8) in accordance with Authority requirements [Regulation 24(1)(a)]:
 - National Certificate in water service planning and design – level 4
 - National Certificate in water services construction – level 4
 - National Certificate in water services operations and maintenance – water – level 4
 - National Certificate in water services operations and maintenance – waste water – level 4
 - National Certificate in water services management, administration and training – level 4
 - National Diploma in water service planning and design – level 5
 - National Diploma in water services construction – level 5
 - National Diploma in water services operations and maintenance – water – level 5
 - National Diploma in water services operations and maintenance – waste water – level 5
 - National Diploma in water services management, administration and training – level 5
 - National First Degree in water service planning and design – level 6
 - National First Degree in water services construction – level 6
 - National First Degree in water services operations and maintenance – water – level 6
 - National First Degree in water services operations and maintenance – waste water – level 6
 - National First Degree in water services management, administration and training – level 6
 - Master's Degree in water service planning and design – level 8
 - Master's Degree in water services construction – level 8
 - Master's Degree in water services operations and maintenance – water – level 8
 - Master's Degree in water services operations and maintenance – waste water – level 8
3. Liaise with all other SGBs in the field whose briefs mandate them to generate Physical Planning, Design and Management qualifications, as well as NSB 03 and NSB 05 [Regulation 24(1)(a) & (e)].
4. Recommend the qualifications generated in 2 above to National Standards Body 12 [Regulation 24(1)(c)].
5. Recommend criteria for the registration of assessors and moderators or moderating bodies [Regulation 24(1)(d)].
6. Accept and perform other related functions as requested by NSB 12 [Regulation 12(1)(e)].

COMPOSITION OF THE SGB

NAME	INSTITUTION	NOMINATING BODY	QUALIFICATION
Coetzee, M	Cobra Watertech	Cobra Watertech	B Sc
Donovan, RP	Department of Water Affairs and Forestry	Directorate Water Conservation	National Diploma for Technicians Diploma in Industrial Administration
Gqweta, ME	Khulani Groundwater Consultants	Geological Society of South Africa	B Sc (Honours)
Howarth, CM	Durban Metro Water Services	Durban Metro Water Services	B Sc (Chemical Engineering)
Jordan, M	Institute for Plumbing	Institute for Plumbing	National Certificate in Plumbing
Kopung, SM	Department of Water Affairs and Forestry	Water Services Operations	B Sc (Ed) Diploma in Computerised Project Management, MBA
Moodie, U	National Community Water and Sanitation Training Institute	National Community Water and Sanitation Training Institute	National Diploma in Medical Technology, N9 Water and Waste Operators Certificate B Tech Ed M Tech Ed
Moodley, R	Umgeni Water	South African Water Board	National Diploma in Analytical Chemistry, National Higher Diploma in Chemistry, Business Management Programme, Certificate in Training
Naude, Y	Institute for Water Quality	Department of Water Affairs and Forestry	Certificate in Laboratory Management Certificate for the training task for the supervisor Certificate in laboratory quality management M. Tech

Polecut, BW	Durban Metro Water Services	Joint Acceptance for Water Instillation Components	B Sc 40 years in water industry
Raftesath, C	Consultant	South African Association of Water Boards	B A H dipEd PDM (Graduate School of Business – Witwaterrand University)
Rice, CP	Professional Diamond Drilling Equipment	Borehole Water Association of Southern Africa	Grad CE (University of Rhodesia) B Sc (Chemistry and Mathematics)
Sekati, MM	Department of Water Affairs and Forestry	Department of Water Affairs and Forestry	B Paed, B Ed, Advanced Diploma in Organisational Development, MSc Human Resource Management
Sekobe, G	Department of Health	Department of Health	Master's in Medical Science.
Viljoen, P	Water Quality Management	Water Quality Management	B Sc. B Sc (Honours)
Wilson, I	Mvula Trust	Mvula Trust	B A H Dip, Lib

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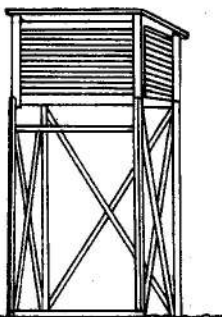
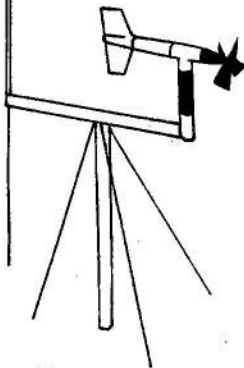
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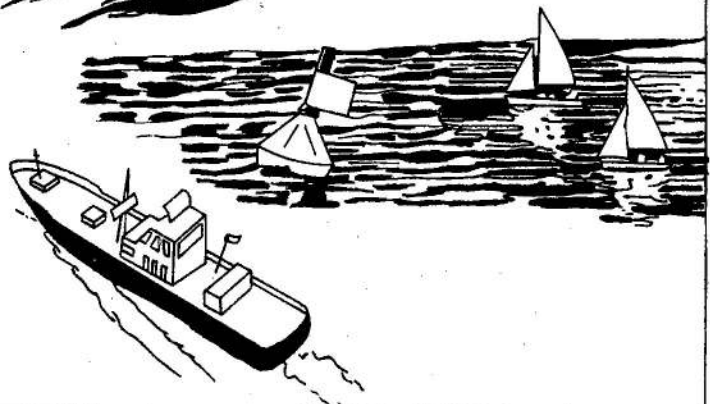
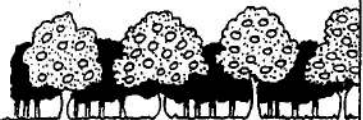
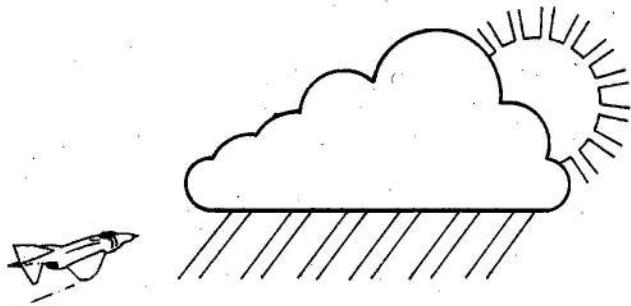
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