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Trade Test Preparation Curriculum Outline: 1) Trade Test Preparation Plumbing It covers the following modules: 1. Install a basin 2. Install a GMS Gutter and shoe 3. Cut, bend and assemble copper piping 4. Install a push through geyser 5. Make and install a GMS Chimney Flashing 6. Install a shower 7. Install a water closet 8. Install a drainage system 9. Fabricate and fit a GMS vent pipe flashing Intensive and specialized training in both theory and practical of the above modules will be conducted according to the specification and requirements of the NAMB curriculum. 2) Trade Test Preparation Welding Prepare and Fillet weld mild steel plates and ferrous materials as specified on drawing and welding and welding procedure specifications (WPS) Shielded Metal Arc Welding – 6G (Pipes) Oxy-Acetylene gas welding (OAW) Bud Weld Horizontal 2G Oxy-acetylene Welding (Mild Steel) Gas Metal Arc Welding (GMAW) Weld ferrous and non ferrous materials Mild Steel 2F Shielded Metal Arc Welding (SMAW) Stainless steel Ferrous materials Manual Metal Arc Welding (MMAW) SMAW & MMAW 3F Vertical up SMAW & MMAW 2G Horizontal Oxy-acetylene gas cutting and grinding GTAW (Gas Tungsten Arc Welding) & GMAW – Gas Metal Arc Welding Ferrous and non ferrous material 6G & 3G & 3F Oxy-Acetylene Brazing (OAB) GTAW Aluminium 3) Trade Test Preparation Electrical 1. Single phase forward/reverse starter (various controls and motors). 2. Three phase forward/reverse starter (various control and motors). 3. Star/delta and Forward/reverse star/delta starter. 4. Sequence starters (automatic, semi-automatic and manual). 5. Motor Test (single and three phase). 6. Cable test (1000V, 230V, 440V and 660V). 7. Current and voltage testing. 8. Load balancing panel (240V and 400V) 9. Current and voltage testing using selector switches. 10. Fault finding on various star/delta starters. 11. Fault finding on various forward/reverse starters. 12. Fault finding on various sequence starters. 13. Fault finding on dual speed motors (rotary and contactor switching). 14. Construction Work All work must be done according to national safety standards and electrical regulation. 4) Trade Test Preparation Boilermaking Boilers heat water or other fluids under extreme pressure to generate electric power and to provide heat. Large tanks and vats are used to process and store chemicals, oil, beer and hundreds of other products. Boilermakers may help erect and repair air pollution abatement equipment, blast furnaces, water treatment plants, storage and process tanks, and smokestacks. Boilermakers also install refractory brick and other heat-resistant materials in fireboxes or pressure vessels. Some install and maintain the huge pipes used in dams to send water to and from hydro-electric power generation turbines. The Boilermakers are skilled in reading and interpreting drawings in the manufacturing process of various metal based components. The artisan must have good welding skills and understand the way metal will respond when heat is applied to it by the type of welding being applied; the understanding of malleability of steel is of the highest importance. The artisan must have good working knowledge of rollers bending machines welders and grinders as well as measuring equipment and methods. Baseline Risk Assessment Oxy - Acetylene Cutting & Welding Grinding And Tempering Arc Welding Plate Forming Pipe Developing & Fabrication Contour Marking MIG & TIG 5) Trade Test Preparation Mechanical Fitter A fitter is an engineering specialist who installs, maintains and/or repairs machines, plant and equipment for a large variety of industries such as manufacturing, aeronautical, electrical, marine, and agricultural. Fitters are responsible for the repair and maintenance of a wide range of equipment, including pumps, engines, compressors, and other mechanical equipment. Fitters may also be responsible for the installation and repair of equipment such as lead pipes, valves, floors and tank linings. They work from detailed drawings using hand and machine tools. Precise measuring is necessary. Their working environment can be very noisy, dirty or dangerous. ENGINEERING DRAWINGS Freehand drawing Code of practice for engineering drawing (symbols and abbreviations) Drawing instruments and equipment Dimensioning methods Isometric drawings Assembly and detailed drawings TOOLS, EQUIPMENT, SCREWS FASTENERS Engineering tools and equipment Types and applications of screw threads Types and function of locking devices and fasteners WELDING AND MATERIALS Engineering materials Principles, equipment & methods of arc welding, gas cutting, brazing & silver soldering SEALS, PUMPS, VALVES Static and dynamic seals and gaskets Types and application of valves Types and application of pumps Types and functions of conveyors MAINTAIN AND ALIGN DRIVES Drives (direct and indirect) Terminology of drives Functions and working principle of drives GEARBOXES, BRAKES AND CLUTCHES Mechanical working principles, types and applications of gearboxes Mechanical working principles, types and applications of clutches Mechanical working principles, types and applications of 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