

Workplace Requirements

- Adhere to design and manufacturing standards: symbols and abbreviations, electrical circuits, schematic and wiring diagrams, connection schedules, layouts and single-line drawings.
- Manufacture objects: filing, sawing, drilling, tapping, reaming.
- Installation of Machinery: Install and level a compressor, motor and machine parts on a fabricated base including pipe and tubing
- AC Machines: connect, test and fault find and single phase induction motors 3 phase squirrel cage induction motors
- Fault Finding: control panels and motor control gear, refrigeration equipment, adjust H.P.L.P. control on commercial equipment, pump down system, defrost hot gas and low temperature equipment, electric systems
- Remove and fit bearings: standard ball bearing, thrust ball bearing, straight roller bearing, thrust roller bearing, taper roller bearing, needle bearing, thrust needle bearing; spherical roller bearing
- Fit and remove bearing to/from a shaft
- Maintain, match, set and replace drives
- Assemblies: perform fits on shafts and hole basis, taper lock bush (clearance, transition, interference), fit seals to components, oil separators, reversing valve, pressure regulating valve, oil pressure switch
- Refrigeration: Evacuate refrigeration systems.
- Charge refrigeration systems
- Adhere to expansion devices and controls: capillary tubes, automatic expansion valves (with internal and external equaliser), distributors, thermostats, pressure switches, oil pressure safety controls and pressure relief devices
- Commission refrigeration equipment/plant
- Clean blockages and contaminated systems
- Maintain condensers and cooling towers (air, water, evaporative, forced and induced draft cooling towers and industrial water coolers)
- Maintain evaporators (plate, bare and finned pipe, shell and tube)
- Maintain accessories; liquid receiver, accumulator, muffler, fitter drier, sight glass, service valves, oil separator, crankcase heater, vibration isolator, shut-off valve, solenoid valve, heat exchanger and a schreader valve
- Service fans- propeller, axial flow and centrifugal
- Maintain compressors; reciprocating, screw, open, hermetic, semi-hermetic
- Maintain, diagnose and repair lubrication systems: force-feed, splash-feed and gravity-feed, recall the requirements for refrigeration oils

Workshop Equipment

- AC / DC Welding Machine
- Gas cutting, Heating and Welding Equipment
- Fixed and portable drilling machines
- Fixed and portable grinding machines
- Grinding wheel dresser
- Mechanical / Hydraulic Press
- Drill bits
- Lifting equipment and tackle
- Crimping and joining tools
- Soldering equipment
- Portable jig-saw
- Dial a charge
- Testing Instruments: voltage tester, multimeter, insulation tester, earth leakage polarity tester, phase rotation tester
- Bench vice
- Work bench
- Compressor and equipment
- Pipe Bender
- G-clamps
- Spirit level



Hand Tools

- Tool Box
- Screw drivers
- Chisels
- Punches
- Steel tape
- Steel ruler
- Hammer
- Pliers
- Socket set
- Clips
- Hacksaw
- Wrenches (Flat / Rings)
- Shifting Spanner
- Vice Grip
- Hand Files
- Square
- Bevel Gauge
- Wire stripper
- Cable knife