

1. Title	Install water pumps
2. Code	EMCUIN220A
3. Range	Work at general industrial plants, power plants, ship repair, plumbing workplaces pumping involved.
4. Level	2
5. Credits	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of and requirements for installation of water pumps</p> <ul style="list-style-type: none"> ◆ Understand the installation requirements for various types of water pumps when reading assembly drawings: <ul style="list-style-type: none"> • requirements for pump foundations • requirements for couplings • requirements for the pump inlet and outlet system <p>6.2 Methods and procedures for installation of water pumps</p> <ul style="list-style-type: none"> ◆ Capable to use alignment and levelling instruments to take measurements of a water pump and its motor foundation, including: <ul style="list-style-type: none"> • Methods of alignment and levelling and calculation of adjustments; • Methods of centring and calculation of adjustments ◆ Capable to use various types of levelling and alignment instruments, such as level gauges and steel wire, to take measurements on-site, including: <ul style="list-style-type: none"> • Horizontal level of foundation surface • Vertical level of foundation bolts ◆ Capable to draw the layout of gaskets according to the dimensions of the foundation ◆ Capable to adjust the radial direction and face deviation of couplings ◆ Capable to fasten foundation bolts to specified torque systematically ◆ Capable to inspect the large moving parts of water pumps after fastening <ul style="list-style-type: none"> • Measure and adjust the impeller swing of vertical water pumps • Measure and adjust the axial jitter <p>6.3 Professionalism in water pump installation</p> <ul style="list-style-type: none"> ◆ Install water pumps according to drawings and works specifications ◆ Control the progress of installation to meet works specifications and quality standards ◆ Understand the legal requirements on work safety, the code of practice and the supplier's guidelines when performing tasks of water pump installation ◆ Capable to use installation tools and equipment effectively

7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none">(i) Capable to install water pumps efficiently;(ii) Capable to complete work tests, including proper execution of leveling and alignment procedures and installation procedures, recording data and adjusting of equipment to required standards; and(iii) Capable to compile reports on installation of water pumps and state clearly their operation.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of mechanics and installation skills.</p>