

1. Title	Install low pressure and high flow water pumps or the same type of pumps
2. Code	EMPEIN301A
3. Range	Perform installation work for low pressure (below 10bar) and high flow (above 200m ³ /hr) water pumps in general industrial plants, power plants or other places.
4. Level	3
5. Credits	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge and requirements for installing low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Understand installation requirements of installation drawings of different types of low pressure and high flow pumps: <ul style="list-style-type: none"> • Base requirements • Coupling requirements • Pump inlet/outlet system requirements for low pressure and high flow pumps <p>6.2 Methods and procedures of installing low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Use equipment alignment and leveling instruments to measure low pressure and high flow pumps and their engine bases, including: <ul style="list-style-type: none"> • equipment alignment and levelling methods and adjusted value calculation; • equipment centering methods and adjusted value calculation ◆ Use all kinds of levelling and alignment methods such as level gauge, drawn steel wire, etc. to measure the leveling of bases, including: <ul style="list-style-type: none"> • horizontal alignment of bases • perpendicularity of anchor bolts ◆ Draw the sizing block configuration plan according to equipment base dimensions ◆ Know about radial swaying, and measurement and adjustment of end offsetting of couplings ◆ Fasten anchor bolts systematically to specified amount of force ◆ Inspect and measure the rotating parts of large-scale low pressure and high flow pumps after fastening <ul style="list-style-type: none"> • Measure and adjust vertical low pressure and high flow pump impeller runout • Measure and adjust axis traverse ◆ Arrange lifting appliances to assist the installation of low pressure and high flow pumps

	<p>6.3 Professionalism in installing low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Follow the drawing and engineering requirements to carry out low pressure and high flow pump installation ◆ Control the engineering progress so as to meet the engineering requirements and quality standard ◆ Follow the safety requirements for work, requirements of the codes of practice and manufacturers' installation guidelines in order to perform low pressure and high flow pump installation ◆ Select and use installation tools or instruments properly
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to perform low pressure and high flow water pump installation work independently; (ii) Capable to complete work test, including correctly performing the procedures of leveling, alignment and installation, recording data and calibrating the equipment to the standards as required; (iii) Capable to complete the simple installation report for low pressure and high flow pumps; and (iv) Capable to report the operational status of low pressure and high flow pumps.
<p>8. Remarks</p>	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMPEIN201A "Install low pressure and low flow water pumps or the same type of pumps".</p>