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| 1. Title | Install high pressure and high flow water pumps or the same type of pumps | |
| 2. Code | EMPEIN302A | |
| 3. Range | Perform installation work for high pressure (above 30bar) and high flow (above 5m 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 high pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Understand installation requirements of installation drawings of different types of high pressure and high flow pumps: <ul style="list-style-type: none"> • Base requirements • Coupling requirements • Pump in/out system requirements for high pressure and high flow pumps <p>6.2 Methods and procedures of installing high pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Use equipment alignment and leveling instruments to measure high 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 high pressure and high flow pumps after fastening <ul style="list-style-type: none"> • Measure and adjust vertical high pressure and high flow pump impeller runout • Measure and adjust axis traverse | |

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| | <p>6.3 Professionalism in installing high pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Follow the drawing and engineering requirements to carry out high 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 high 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 high 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 high pressure and high flow pumps; and (iv) Capable to report the operational status of high 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 EMPEIN202A "Install high pressure and low flow water pumps or the same type of pumps".</p> |