

1. Title	Chemical treatment and water quality maintenance for industrial water	
2. Code	EMPEOM327A	
3. Range	Perform chemical treatment and water quality maintenance for industrial water in general industrial plants, power plants or other places.	
4. Level	3	
5. Credits	6	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Properties of industrial water treatment system and operating principle of water treatment</p> <ul style="list-style-type: none"> ◆ Boiler system <ul style="list-style-type: none"> • Know about the principles of dust proof and anti-corrosion, and know the chemical theory and applications of water treatment chemicals such as sediment control agents, corrosion inhibitor, cohesion agent and oxygen scavenger • Know about chemical parameters commonly used in water treatment, such as conductivity, water hardness and pH value ◆ Closed refrigeration system and open cooling system <ul style="list-style-type: none"> • Know about the principle of anti-corrosion, and know the chemical theory and applications of water treatment chemicals such as microbial control agents and defoamers <p>6.2 Perform chemical treatment and water quality maintenance</p> <ul style="list-style-type: none"> ◆ Master the operation of water pump, metering pump and common valves to perform dosing of chemicals ◆ Master the operation of handheld and online chemical testing instruments to perform water quality test on site ◆ Record the water quality of the system on regular basis <p>6.3 Professionalism in chemical treatment and water quality maintenance for industrial water</p> <ul style="list-style-type: none"> ◆ Correctly use and add chemicals, such as anti-scale agents, anti-rust agents, anti-microbial agents and defoamers, according to: <ul style="list-style-type: none"> • Environmental protection laws, technical memorandum, codes of practice and manufacturer's practical guidelines • Dosage correctly adjusted • Knowledge of chemical treatment and the use of personal protection equipment 	

7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) Capable to independently perform chemical treatment and water quality maintenance for industrial water; (ii) Capable to correctly collect and keep the water samples for testing; (iii) Capable to complete simple work records on chemical treatment and water quality maintenance for industrial water (including system water quality reports); and (iv) Capable to clearly report work progress of chemical treatment and water quality maintenance for industrial water.
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of mechanical and chemical environmental protection in general.