

1. Title	Supervise the overhaul of low pressure and high flow water pumps	
2. Code	EMPERM403A	
3. Range	Supervise the routine overhaul of low pressure (below 10bar) and high flow (above 200m ³ /hr) water pumps (e.g. axial flow pumps , mixed flow pumps and centrifugal pumps) in general industrial plants, power plants or other places.	
4. Level	4	
5. Credits	6	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Construction and overhaul method of low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Master the construction of low pressure and high flow water pumps, including: <ul style="list-style-type: none"> • Pump shell, blade wheel • Seal ring • Shaft seal • Bearing ◆ Master the common defects of low pressure and high flow water pumps, including: <ul style="list-style-type: none"> • Cavitations • Static and dynamic balancing of blade wheel • Shaft bending • Seal ring gaps too large • Wear and tear of shaft seal • Bearing loss ◆ Master the use, repair and maintenance of repairing tools and measuring instruments ◆ Master the key points and quality standards for repairing low pressure and high flow water pumps, including disintegration, inspection, reconditioning and testing <p>6.2 Supervise the overhaul of low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Supervise and coordinate overhaul procedures for low pressure and high flow water pumps including disintegration, cleaning and inspection, reconditioning, replacing parts, reinstalling and testing, including: <ul style="list-style-type: none"> • Treatment of cavitation loss • Measurement of shaft curvature • Measurement and adjustment of seal ring gaps • Adjustment of shaft seal • Installation of bearings 	

	<p>6.3 Professionalism in supervising the overhaul of low pressure and high flow water pumps</p> <ul style="list-style-type: none"> ◆ Supervise the overhaul of low pressure and high flow water pumps according to drawings, engineering and safety requirements ◆ Supervise, coordinate and control the overhaul of low pressure and high flow water pumps so as to meet the engineering requirements and quality standards
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to supervise the whole process of overhaul for low pressure and high flow water pumps; and (ii) Capable to compile supervisory report on the overhaul of low pressure and high flow water pumps.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMPEIN301A “Install low pressure and high flow water pumps or the same type of pumps”.</p>