

1. Title	Formulate the inspection, commissioning and testing guidelines and standards for the automatic train control (ATC) system equipment on train
2. Code	EMRAIT512A
3. Range	Refer to the design and functions of the ATC system equipment on the train, train control design and the overall design of the railway signal and control system and apply knowledge and techniques of electronic circuit control to formulate the inspection, commissioning and testing guidelines and standards for the ATC system equipment on train.
4. Level	5
5. Credits	4
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Design, working principles and standards of the ATC system equipment on train</p> <ul style="list-style-type: none"> ◆ Understand the train control design and the overall design of the railway signal and control system ◆ Understand the working principles of the ATC system ◆ Understand the design, structure and working principles of the ATC system equipment on train ◆ Know about the application of the inspection and testing guidelines of manufacturers ◆ Master the techniques of working out the inspection, commissioning and testing standards for the railway signal and control system equipment ◆ Understand the application of typical measuring and testing instruments and tools for the railway signal system <p>6.2 Methods and procedures of formulating the inspection, commissioning and testing guidelines for the ATC system equipment on train</p> <ul style="list-style-type: none"> ◆ Refer to the design and functions of the ATC system equipment on train, train control design and the overall railway signal and control design and draft, test and formulate the inspection, commissioning and testing guidelines and standards for the ATC system equipment on train including the electronic control unit and interface unit. Aspects to be covered are: <ul style="list-style-type: none"> • Inspection procedures and standards • Function tests and standards • Interlock tests and standards • Standards for equipment setting • Important points for inspection, testing and setting ◆ Draft, test and formulate the inspection, commissioning and testing guidelines and standards for the ATC system equipment under train, including: <ul style="list-style-type: none"> • Receiving antenna

	<ul style="list-style-type: none"> • Transmitting antenna • Accelerometer • Tachometer • Docking antenna
6.3	<p>Professionalism in formulating the inspection, commissioning and testing guidelines for the ATC system equipment on train</p> <ul style="list-style-type: none"> ◆ Formulate the inspection, commissioning and testing guidelines for the ATC system equipment on train according to the standards and requirements for work safety, health, environmental protection and quality management of railway works ◆ Understand the safety guidelines as required by the law and codes of practice in formulating the inspection, commissioning and testing guidelines for the ATC system equipment on train
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> (i) Capable to draft a set of inspection, commissioning and testing guidelines and standards for ATC system equipment on train according to commissioning requirements; and (ii) Capable to test the effectiveness of the drafted inspection, commissioning and testing guidelines and standards efficiently; analyze data and conduct reviews and modifications.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of electronic control circuit and railway signal system.</p>