

Specification of Competency Standards for the Watch & Clock Industry

Unit of Competency

1. Title	Know about the Mechanism and Functions of a Mechanical multi-function movement and Master the Concept of Isochronism Regulating
2. Code	WCZZDN401A
3. Level	4
4. Credit	9
5. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>5.1 Master the operating principles of a mechanical multi-function movement</p> <ul style="list-style-type: none"> ◆ Know about the definitions of “multi-function”, “additional function” and “complicated Timepiece” from a technical point of view ◆ Know about the functions and operation principles of mechanical movements that possess additional functions apart from hour, minute and second display: <ul style="list-style-type: none"> • With self-winding function: <ul style="list-style-type: none"> ▸ Principle of winding motion driven by oscillating rotor and self-winding mechanism • With calendar (date) display function: <ul style="list-style-type: none"> ▸ Principle of calendar mechanism driven by motion work mechanism ▸ Principle of calendar mechanism adjusted directly by winding and setting mechanism • With calendar and day display function: <ul style="list-style-type: none"> ▸ Principle of calendar and day mechanism driven by motion work mechanism ▸ Principle of calendar and day mechanism adjusted directly by winding and setting mechanism

	<ul style="list-style-type: none"> • With time alarm function <ul style="list-style-type: none"> ▸ Principle of alarm device driven by motion work mechanism ▸ Principle of alarm device adjusted directly by winding and setting mechanism and the power source (winding) of the alarm device • With international time/GMT display function <ul style="list-style-type: none"> ▸ Principle of international time display mechanism driven by gear train transmission • Basic principle of complicated mechanical movement with chronograph <ul style="list-style-type: none"> ▸ Operation principle of start/stop push buttons ▸ Operation principle of reset push button <p>5.2 Know the structure and function of a mechanical multi-function movement system</p> <ul style="list-style-type: none"> ◆ Know about the following mechanisms in a mechanical multi-function movement and the name of each basic part: <ul style="list-style-type: none"> • Self-winding mechanism • Calendar display mechanism and quick setting system • Calendar and day double display mechanism and quick setting system • Time alarm device and alarm mechanism • International time display device ◆ Know the quality features and key points of mechanical multi-function movements of different origins: <ul style="list-style-type: none"> • Swiss Made • Germany Made • Japan Made • China Made
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	<p>5.3 Know about the concept of isochronism regulating</p> <ul style="list-style-type: none"> ◆ Know about the basic concept of isochronous errors and its significance to mechanical movements: <ul style="list-style-type: none"> • Accuracy of movement • Quality assurance of movement • Specification of mechanical movement repairing techniques ◆ Master the adjustment skills for isochronous errors ◆ Master the application of mechanical movement testing instrument to analyze isochronous errors <p>5.4 Guide subordinates to master product knowledge and work skills</p> <ul style="list-style-type: none"> ◆ Master and apply training skills to guide subordinates in the repair work and give professional advice
6. Range	In general Timepiece repair and after-sales service stations, capable of understanding the principle about the structure and function of a mechanical multi-function movement system to carry out repair and supervise relevant work.
7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) capable of analyzing and solving some more complicated problems in Timepiece assembling and repair.
8. Remarks	The credit value of this unit of competency is set on the presumption that the learners already have basic knowledge about the structure and function of mechanical and digital movements.