

CWI Services Case Study: 004

Contract Responsible Welding Coordinator Service

1 Background

An aircraft component repair company in Malaysia was required to improve their welding repair activities by complying with the responsible welding coordinator (RWC) requirements of ISO 14731 as instructed by an aviation regulator. In accordance with the RWC qualification requirements of ISO 14731, the responsible welding coordinator shall be qualified based on the education, examination and qualification requirements of International Institute of Welding (IIW). Due to unavailability of qualified personnel at the aircraft component repair company, Chen Welding Integrity (CWI) Services was engaged by the company to provide contract RWC service for one year.

In order to ensure the compliance of welding coordinator qualification requirements specified by ISO 14731, CWI Services provided a Certified International Welding Engineer (CertiWE) experienced with welding quality audit and familiar with ISO 14731 requirements for this project.

2 Scope of service

The welding coordination service was provided by complying with requirements of ISO 14731 and ISO 3834 for RWC task and responsibilities and welding quality respectively. Welding coordination activities were performed by monthly visit in one year service duration.

The work under the scope welding coordinator service was performed in three stages which are surveillance, bridging and implementation. The stages of work were formulated by the CertiWE of CWI Services based on the initial surveillance outcomes and the company existing practices. The summary of welding coordination activities and outcomes achieved are illustrated in the Figure 1. The details of the welding coordinator activities are elaborated in the following sections:

2.1 Stage 1 – Surveillance

During the initial stage of the service, a comprehensive surveillance of welding repair, inspection and quality control processes was carried out. The surveillance was carried out by plant walkabout, interview with responsible personnel and review relevant documents. The surveillance was carried out to understand the current welding, quality control and record management practices. The task completed in the surveillance stage are as follows:

- Surveillance of existing welding repair practices
- Review welding quality control and record management practices
- Identify incompliance and gap in accordance with the requirements of ISO 14731 by surveillance.

The incompliances and gaps identified were presented to the management of the company after the surveillance.

2.2 Step 2 – Bridging

In order to rectify the incompliances and gaps, recommendations were provided by the CertiWE of CWI Services. Furthermore, a procedure was established to bridge the existing practices and recommended practices to improve the welding practices for meeting the requirements of ISO 14731. Quality control

record templates specific for meeting ISO 14731 requirements were also produced under the procedure development scope. The task completed in the bridging stage are as follows:

- Provide recommendations to rectify the incompliances and gaps.
- Produce welding repair procedure to map the existing practices with the practices for improving compliances in accordance with ISO 14731 requirements.
- Produce welding quality record templates specific for meeting ISO 14731 requirements.

2.3 Stage 3 – Implementation

In the implementation stage, assistance for welding repair procedure implementation was given. The procedure was implemented by presenting the requirements and policy of the procedure to all the relevant parties. Trials to exercise the welding repair requirements and policy of the procedure were also carried out with the responsible engineer.

Furthermore, regular surveillance in accordance with ISO 14731 was also performed to examine the compliance of welding repair, inspection and welding quality record management practices. The task completed in the implementation stage are as follows:

- Implement the welding repair procedure.
- Carry out trials for welding repair procedure implementation
- Carry out regular surveillance of welding repair, inspection and welding quality record

2.4 Coaching

Apart from the welding coordinator service under the contract, the responsible engineer of the company was coached by the CertIWE of CWI Services to perform welding coordination and surveillance activities. The responsible engineer also coached to review and identify welding requirements in accordance with product and welding qualification codes.

3 Outcomes

After receiving the welding coordination services provided by CWI Services, the aircraft component repair company has benefitted in the following aspects:

- The welding repair procedure and welding quality record practices met the requirements of ISO 14731.
- The welding repair and welding quality record practices satisfied the audit requirements of the aviation regulator.
- The welding repair and welding record management practices of the company improved to the quality standard of ISO 14731.
- The responsible engineer capable to carry out welding surveillance in accordance with ISO 14731 requirements and derive welding requirements based on customer and code requirements.

Contact us

Further information related to contract responsible welding coordinator services, please visit

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Inputs

Surveillance:

- Welding repair practices
- Review welding quality control and record management practices
- Identify incompliances and gaps

Bridging:

- Provide recommendations to rectify the incompliance and gaps
- Produce welding repair procedure and record templates in compliance with ISO 14731 requirements

Implementation:

- Implement the welding repair procedure
- Carry out trials to exercise procedure requirements
- Carry out regular surveillance in accordance with ISO 14731 requirements

Coaching:

- Welding coordination and surveillance
- Review and identify welding requirements

Objectives

**ISO 14731
responsible welding
coordinator and
aviation regulatory
compliances**

Outcomes

The welding repair procedure and welding quality record practices met the requirements of ISO 14731.

The welding repair and welding quality record practices satisfied the audit requirements of the aviation regulator.

The welding repair and welding record management practices of the company improved to the quality standard of ISO 14731.

The responsible engineer capable to carry out welding surveillance in accordance with ISO 14731 requirements and derive welding requirements based on customer and code requirements.

Figure 1 The summary of welding coordination activities and outcomes