Title	**Operate an eddy current separator for scrap metal recycling**		
Level	**3**	**Credits**	**6**

Purpose	This unit standard is for people working in the scrap metal recycling industry. People credited with this unit standard are able to: demonstrate knowledge of eddy current separation; and control the operation of an eddy current separator.

Classification	Resource Recovery > Scrap Metal Recycling

Available grade	Achieved

Guidance Information

1 All work practices must comply with:
Hazardous Substances and New Organisms Act 1996;
Health and Safety at Work Act 2015;
Resource Management Act 1991;
The New Zealand Waste Strategy: Reducing Harm, Improving Efficiency 2010 Ministry for the Environment, available at http://www.mfe.govt.nz.

2 Industry publications relevant to this unit standard include documents:
Eddy Current Separators Principles and practices by ERIEZ Magnetics, available at http://www.eriez.com.

3 Hazard controls, safety procedures, and personal protective equipment must be used throughout operations in accordance with company procedures.

4 Definition
Company procedures mean the documented methods for performing work activities and include health and safety, environmental, and quality management requirements. They may refer to manuals, codes of practice, or policy statements.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of eddy current separation.

Performance criteria

1.1 The principle of eddy current separation is explained in accordance with industry publications.

Range magnetic fields, repelling force, conducting particles, eddy current.

1.2 Eddy current separation is explained in relation to variable factors that influence the process.

Range factors – particle size, particle shape, particle conductivity, density, moisture content, size distribution, fibrous content, metallic content.

1.3 Eddy current separation is explained in terms of the effects of variable parameters.

Range parameters – belt speed, rotor speed, throughput, feed method, splitter setting.

1.4 Effects of ferrous materials on eddy current separation operations are identified and the importance of removing them is explained in terms of safety and equipment maintenance.

1.5 Splitter configurations are explained in relation to particle sizes.

Range 50-100mm, 10-50mm, below 10mm.

Outcome 2

Control the operation of an eddy current separator.

Performance criteria

2.1 Safety hazards are identified, controlled, and monitored in accordance with legislation and company procedures.

2.2 Separation system is checked and adjusted to meet requirements of specified materials.

Range mixed waste or mixed metallic scrap.

2.3 Control ensures that spread and thickness of material is maintained on conveyor to achieve optimum separation.

2.4 Equipment is cleaned, checked, and maintained in accordance with operating manuals and company procedures.

2.5 Emergency shut down is demonstrated in accordance with company procedures.

Planned review date	31 December 2023

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 January 2007	N/A
Rollover and Revision	2	28 March 2019	N/A

Consent and Moderation Requirements (CMR) reference	0014

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.