



**INDUSTRIAL SAFETY DIVISION
DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH MALAYSIA**

**APPLICATION GUIDE FOR DESIGN VERIFICATION OF LIFT, ESCALATOR AND
WALKALATOR**

2025

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1.0 INTRODUCTION

Every power driven lifting machinery such as those using electricity, diesel, pneumatic or equivalent energy sources must possess a valid Certificate of Fitness (CF) to be operated. For this purpose, design verification must first be obtained from the Department of Occupational Safety and Health (DOSH) Headquarters prior to its construction, installation or use.

This application guide for the design verification application of lift, escalator and walkalator is intended to ensure that each model to be installed obtains design verification approval prior to any application for permission to install. This is to ensure that the plant installation complies with specifications approved by the Department based on the latest edition of recognized standards. The primary objective of this design verification platform is to assess and ensure each plant's compliance with the relevant legislative provisions, thereby safeguarding the health and safety of users.

This application guide is prepared in line with present progress for the reference of applicants when submitting design verification applications for lift, escalator and walkalator. It aims to ensure that applicants are provided with accurate and clear guidance to submit applications that are of high quality and in accordance with the current requirements of the Department. **Any application that does not meet the requirements set out in this application guide will be rejected.**

2.0 ENABLER

The Occupational Safety and Health (Plant Requiring Certificate of Fitness) Regulation 2024 is enacted under Section 27B of the Occupational Safety and Health (Amendment) Act 2022, which empowers the Minister to declare any plant as requiring a Certificate of Fitness. These Regulations come into operation on 1st June 2024. Under these Regulations, lifting machinery are among the plants classified as requiring a Certificate of Fitness.

3.0 INTERPRETATION

- i. “Lifting machinery” means any equipment for lifting, raising, transporting or lowering loads.
- ii. “Walkalator” means a lifting machinery for the conveyance of person in which the user carrying surface remains parallel to each direction of motion and is uninterrupted.
- iii. “Lift” means a lifting machinery with traction, positive or hydraulic drive, functioning at specific levels and having a carrier moving along guides which are rigid and inclined at an angle of more than 15 degrees to the horizontal, or along a fixed course even where it does not move along rigid guides, for the purposes of the transportation of persons only, or persons and goods, but it does not include lifts with rated speed less than 0.15 meter per second.

4.0 SCOPE OF APPLICATION

This design verification application for lift, escalator and walkalator applies to:

- i. Lift, escalator and walkalator models that have not yet obtained design verification;
- ii. Renewal of expired design verification approvals;
- iii. Updating design verification approval that is still within its validity period.

5.0 APPLICATION REQUIREMENT

Each application must comply with the following conditions:

- i. Applications may only be submitted by a Competent Person (Company).
- ii. The Qualified Person Lift is responsible for reviewing and ensuring that the application fully complies with this application guide the Occupational Safety

and Health (Plant Requiring Certificate of Fitness) Regulations 2024 and recognized standards.

- iii. Each design verification application is restricted to **one model only**. If the system certificate and test report contain more than one model, separate applications must be submitted for each.
- iv. If the system certificate and test report cover more than one **type** of plant (e.g., Passenger Lift / Passenger and Goods Lift), separate applications must be submitted for each type.
- v. Applications will be rejected if submitted documents are hard to read, difficult to review, unclear, or in languages other than Malay or English (translations from official translation institutions are accepted).
- vi. Information entered in the MySKUD system must correspond with the attached documents.
- vii. All documents must be scanned from original or certified true copies, without edits.
- viii. For renewals and updates, previous application reference numbers must be included in the online form (e-form).
- ix. Payment must be submitted along with the application.
- x. Any amendments to these conditions are subject to the discretion of top management.

6.0 INSTRUCTION FOR FILLING OUT APPLICATION DETAILS

Please refer to the Application Guide For Design Verification of Lift, Escalator and Walkalator available in the MySKUD.

7.0 APPLICATION DOCUMENTS

Each application must be accompanied by an official letter uploaded under the 'Other Documents' folder and must include:

- i. Company letterhead with name and address of the Competent Person (Company);
- ii. Reference number and date of the letter;
- iii. Letter subject stating clearly the type of application (new/renewal/update), category, brand and model.

7.1 APPLICATION CATEGORY: PASSENGER LIFT, PASSENGER AND GOODS LIFT – NEW AND RENEWAL

List of Application Documents

Documents that must be attached when submitting the application include the following:

7.1.1 Design Drawings

- 7.1.1.1 Standard/generic/master design drawings verified by an Authorized Inspecting Body **or** submitted by the manufacturer for the applied model;
- 7.1.1.2 Must clearly state the model, recognized standards, and manufacturer information;
- 7.1.1.3 Must cover the complete scope of the model as stated in the Certificate and Test Report of Lift System.

7.1.2 Design Calculations

- 7.1.2.1 A complete design calculation document (Model Design Calculation / Product Model Design Calculation Book or equivalent) based on the latest edition of a recognized standards;
- 7.1.2.2 Design calculations must include at least those listed in **Appendix 1**.

7.1.3 Certificate And Test Report of Safety Components Verified By An Authorized Inspecting Body

- 7.1.3.1 Safety Component Certificates must match those listed in the Certificate and Test Report of Lift System only;

7.1.3.2 Safety Component Test Reports must match those listed in the Certificate and Test Report of Lift System or equivalent

7.1.4 Certificate And Test Report of Lift System Verified By An Authorized Inspecting Body

7.1.4.1 Certificate And Test Report of Lift System must be verified by an Authorized Inspecting Body as listed in the First Schedule of the Occupational Safety and Health (Plant Requiring Certificate of Fitness) Regulations 2024;

7.1.4.2 The required criteria in the Certificate and Test Report of Lift System must meet at least those listed in **Appendix 2**;

7.1.4.3 If the certificate and report are incomplete as per **Appendix 2**, the applicant must submit a certificate from the Authorized Inspecting Body and a manufacturer's report meeting **Appendix 2**, verified by the Authorized Inspecting Body.

Note: Verification of the report (**Appendix 2**) by the Authorized Inspecting Body may be submitted in the form of an official letter/declaration/official email.

7.1.5 Certificate And Report of Main Suspension and Governor Ropes

7.1.5.1 Certificate and report for wire ropes (e.g., CSB, Ultra Rope) certified by an Authorized Inspecting Body and specified in the Certificate and Test Report of Lift System (e.g., test certificate number, test certificate by Authorized Inspecting Body, if any); or

7.1.5.2 Wire Rope Manufacturer's certificate and report (recognized lab/testing centre) specifying diameter, construction, minimum breaking load, tensile strength, recognized standard, and related specifications; or

7.1.5.3 Wire Rope Manufacturer's certificate and wire rope report specifying all the above details, based on recognized standards.

Note: The wire rope report must be issued by a lab/testing centre recognized by:

- i. Department of Standards Malaysia under **MIBAS**; or

- ii. Testing labs/centers accredited by a **recognized accreditation body** under **MRA**, implemented by **ILAC** and **APAC**.

7.1.6 Other Documents

- 7.1.6.1 Application letter as mentioned in **Section 7** of this application guide;
and
- 7.1.6.2 Other relevant supporting documents.

7.2 APPLICATION CATEGORY: ESCALATORS AND WALKALATOR – NEW AND RENEWAL

List of Application Documents

Documents that must be attached when submitting the application include the following:

7.2.1 Design Drawings

- 7.2.1.1 Standard/generic/master design drawings by the manufacturer for the applied plant model;
- 7.2.1.2 Must clearly state the model, recognized standard, and manufacturer details of the escalator or walkalator;
- 7.2.1.3 Must contain the specifications of the escalator and walkalator.

7.2.2 Design Calculations

- 7.2.2.1 A document containing complete calculations (Model Design Calculation / Product Model Design Calculation Book or equivalent) based on the latest edition of a recognized standards;
- 7.2.2.2 Design calculations must include, but are not limited to static stress analysis of supporting structure, stopping distance and sufficient breakage resistance of the parts directly driving the steps, pallets or the belts.

7.2.3 Certificate And Test Report of Escalator And Walkalator Component

- 7.2.3.1 Certificates and test reports, or their equivalents, must be submitted at minimum for the following components:
 - i. Step Chain
 - ii. Comb Support Plate

- iii. Floor Plate
- iv. Roller
- v. Controller/Control Panel
- vi. Electronic System
- vii. Driving Unit

7.2.4 Escalator And Walkalator System Certificate and Test Report Verified by Authorized Inspecting Body

7.2.4.1 System certificates and reports for escalators and walkalator must be verified by an **Authorized Inspecting Body**, as listed in the **First Schedule** of the **Plant Requiring Certificate of Fitness Regulations 2024**;

7.2.4.2 The list of required criteria to be included in the certificate and report must comply with **Appendix 3** at minimum;

7.2.4.3 If the certificate and report are incomplete as per **Appendix 3**, the applicant must submit documents issued by the manufacturer covering the missing items.

7.2.5 Other Documents

7.2.5.1 Application letter as mentioned in **Section 7** of this application guide;
and

7.2.5.2 Other relevant supporting documents.

7.3 APPLICATION CATEGORY: UPDATE OF DESIGN VERIFICATION FOR LIFT, ESCALATOR AND WALKALATOR

Applications for updates to design verification of lifts, escalators, and walkalator apply for the following cases:

General Conditions

- a) The Lift or Escalator and Walkalator System Certificate and Test Report are still within their validity period;
- b) The Design Verification Approval Letter is still within its validity period.

Specific Conditions

- a) Amendments to the Specification Table (Scope of Application/Main Characteristics) within the previously approved range;
- b) Errors in the Lift or Escalator and Walkalator System Certificate and Test Report (e.g., manufacturer name, address);
- c) Replacement of safety components that have been discontinued.

List of Application Documents

Documents to be submitted include:

7.3.1 Design Drawings

- 7.3.1.1 Engineering drawings (standard/generic/master) from the manufacturer for the plant model applied;
- 7.3.1.2 Must clearly state the model, recognized standard, and manufacturer details for the lift, escalator or walkalator;
- 7.3.1.3 Must contain specifications for the lift, escalator and walkalator.

7.3.2 Amendments to Specification Table (Scope of Application/Main Characteristics)

- 7.3.2.1 A document showing a comparison of changes made, along with an explanation from the lift/escalator/walkalator manufacturer, signed and verified by an authorized person (e.g., Quality Manager or Design Manager).

7.3.3 Errors in the System Certificate and Report for Lift or Escalator and Walkalator

- 7.3.3.1 Amended system certificates and reports verified by the Authorized Inspection Body for the respective lift, escalator or walkalator;
- 7.3.3.2 Supporting documents explaining the correction, signed and verified by an authorized person (e.g., Quality Manager or Design Manager).

7.3.4 Replacement of Safety Components That Have Been Discontinued

- 7.3.4.1 A document from the manufacturer explaining the replacement or substitution, signed and verified by an authorized person (e.g., Quality Manager or Design Manager);

7.3.4.2 Amended system certificates and reports verified by the Authorized Inspecting Body for the respective lift, escalator or walkalator;

7.3.4.3 Certificates and test reports of the replaced components, issued by the Authorized Inspecting Body for the respective components involved.

8.0 INFORMATION

The Department reserves the right to reject an application or revoke a design verification approval if it is found that:

- i. Any of the terms or conditions set by the Director General under Section 27C(3) of the Occupational Safety and Health Act 1994 (as stated in the verification letter) have not been met or have been breached; or
- ii. The application documents or information submitted are falsified; or
- iii. Any other conditions set by DOSH from time to time are violated.

9.0 FEES

The applicable fees depend on the plant category and type. Please refer to the Sixth Schedule of the Occupational Safety and Health (Plant Requiring Certificate of Fitness) Regulations 2024.

10.0 CLIENT CHARTER

Applications submitted with complete documentation will be processed within 30 working days from the date of receipt.

**Lift Unit
Design Approval Section
Industrial Safety Division
Department of Occupational Safety and Health
Ref. Update: 25 July 2025**

Appendix 1 – List of Design Calculation Information

A. General Information Required in the Design Calculation Document:

1. Recognized standards;
2. Model;
3. Manufacturer's details.

B. The Scope of Design Calculation Includes, But Is Not Limited To, The Following:

1. Main parameters;
2. Calculation of traction capacity;
3. Calculation of safety of traction ropes;
4. Calculation of car guides;
5. Calculation of safety gear;
6. Calculation of speed governor;
7. Calculation of overspeed governor ropes.

Appendix 2 – Criteria for Lift System Certificate and Test Report

A. Information and Criteria Required in the Lift System Certificate:

1. Certificate number;
2. Name of Authorized Inspecting Body;
3. Full name and address of lift manufacturer;
4. Latest edition of recognized standards;
5. Type of plant (Passenger Lift/Passenger and Goods Lift);
6. Model;
7. Date of certificate issuance; and
8. Expiry date of certificate if applicable.

B. Information and Criteria Required in the Lift System Test Report:

1. Contract load, number of passengers and car area;
2. Contract speed;
3. Maximum travelling height;
4. Machine room position;
5. Machine/Motor type;
6. Controller/control type/control system;
7. Suspension type;
8. Diameter of suspension rope;
9. Maximum and minimum car weight;
10. Type of guide rail of car and counterweight; and
11. Complete list of safety components including model information, manufacturer and test certificate number issued by the Authorized Inspecting Body.

Appendix 3 – Criteria for Escalator and Walkalator System Certificate and Test Report

A. Information and Criteria Required in the System Certificate:

1. Certificate number;
2. Name of Authorized Inspecting Body;
3. Full name and address of the manufacturer;
4. Recognized standards;
5. Type of plant (escalator/walkalator)
6. Model;
7. Date of certificate issuance; and
8. Expiry date of the certificate if applicable.

B. Information and Criteria Required in the System Test Report:

Details of technical specifications (scope of application), including but not limited to:

1. Recognized standards;
2. Model name of the escalator or walkalator;
3. Capacity;
4. Speed;
5. Angle of inclination;
6. Rise (height);
7. Pallet/step dimension;
8. Motor power;
9. Controller/control type/control system.