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## Scope

This manual is one of a series containing standards for construction of the BC Hydro electrical distribution plant within the service area of BC Hydro. A new distribution plant shall be designed, constructed, owned, operated, maintained and repaired to these standards.

## Purpose of Standards

BC Hydro objectives require standardization to:

a) Ensure uniform safety requirements comply with BC statutes and regulations.
b) Provide uniform system reliability.
c) Provide uniform operating practices.
d) Permit economic bulk purchasing of materials.
e) Achieve optimum life cycle cost of plant construction.
f) Effect efficient quality assurance.

## Responsibility

The Distribution Standards Department prepares these standards and verifies that specified plant and procedures will perform adequately under all normally expected conditions encountered throughout the province of British Columbia. These standards are approved by Professional Engineers. It is the responsibility of BC Hydro Managers to ensure that the standards are followed unless abnormal conditions are encountered that require variations. These variations should be kept to a minimum and their performance shall be the responsibility of the Professional of Record in charge of the project, who will record and seal the variation based on satisfactory qualifications and experience to do so. As per the latest revision of the BC Hydro Distribution Owner's Engineer Guide, these variations must be accepted by BC Hydro's Owner's Engineer.

## Use of Stock Materials

The electrical distribution plant covered by these standards is built using stock materials approved by a Professional Engineer as required by law. The use of non-stock materials for special and unusual situations must be approved by Distribution Standards or the BC Hydro Engineer responsible for the project.

## Revisions to Manual

These standards are revised from time to time to improve the safety, performance, workability, cost effectiveness or appearance of the plant. The existing plant built to previous standards need not be updated unless so specifically advised by BC Hydro. When maintenance or other work, such as voltage conversion or conductor change is being done, updating plant to current standards is encouraged.

## Mailing Addresses

The manual has been issued to a corporation or firm rather than to an individual. The corporation or firm is responsible for the safekeeping of the manual, and for keeping it current. Changes of address or in number of copies required must be reported promptly.

Suggestions for changes in the manual, or required changes of address may be made on the pre-addressed comment sheet included in the Manual and with each issue of revision.

# Information Bulletin:

## New Standard ES54 P1-03 Vault / Box Safety Aluminum Lids Slip Resistance

## 1.0 Items Covered

ES54 P1-03 Vault / Box Safety Aluminum Lids Slip Resistance

## 2.0 Overview

This bulletin is intended for asset managers and district maintenance analysts.

ES54 P1-03 has been added to the public safety standards. It is intended for informational purposes and provides background for BC Hydro slip resistance specifications.

The standard discusses international research and standards considered in developing suitable testing procedures and safety criteria for slip-resistant enclosure lids impacting pedestrian use in varying conditions. The sesting method conducted by BC Hydro suppliers used a British pendulum tester (Figure 1) to provide a British pendulum number (BPN) rating, a universally accepted metric for slip resistance.

BC Hydro distribution enclosure lids are tested to a minimum rating of 55 BPN. As an additional safety precaution, gratings on transformer vaults are installed perpendicular to the sidewalk alignment to further provide adequate slip resistance.

## 3.0 Action

ES54 P1-03 has been posted for information and has been in effect for several years. It does not affect any in-flight or new designs except for works conducted to address public safety slipping concerns initiated by associated maintenance groups.

### Asset Managers and District Maintenance Analysts

Asset managers and maintenance analysts shall reference the newly released standard when evaluating public safety slipping concerns of distribution enclosure lids.

# 4.0 Figures

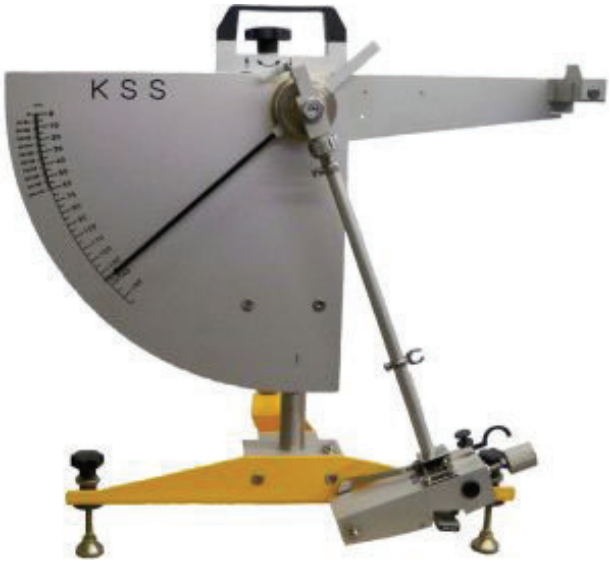


**Figure 1** – British pendulum tester

# 5.0 Distribution Standards Contact

| | |
|---|---|
| Name: Jordan Yang | Email: Jordan.yang@bchydro.com |
| Phone: | Mobile: 604-989-8339 |

# 6.0 Approval

| Recommended | Reviewed | Approved |
|---|---|---|
| J. Yang | L. Stevanovic | H. Giesbrecht |
| Date: 2023-11-17 | Date: 2023-11-17 | Date: 2023-11-17 |