Stanvac®

Keeping People Safe. Keeping Plants Running.

GOVERNMENT OF INDIA

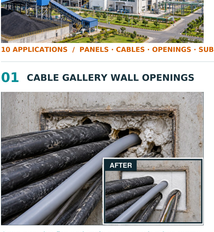
MINISTRY OF POWER

CENTRAL ELECTRICITY AUTHORITY

CEA SAFETY REGULATIONS 2023

Notification No. CEA-PS-16/1/2021-CEI Division | 8 June 2023

Also draws on CEA Thermal Safety Audit · January 2022 + BOP design guidance



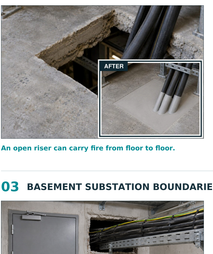
THERMAL POWER PLANTS.

FIRE SAFETY. PRODUCTION PROTECTED.

Ministry guidance. Stanvac technology. Your gain.

10 APPLICATIONS / PANELS · CABLES · OPENINGS · SUBSTATIONS

01 CABLE GALLERY WALL OPENINGS



Open gaps let fire and toxic gases reach other rooms.

CEA SAFETY AUDIT 2022 · 5.1.3(D)(2)

Seal all cable entries and exits to prevent fire and toxic gases progressing into adjacent rooms.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

Combines mortar strength with mineral-wool boards for **load-bearing safety and easier cable retrofitting**. Match the tested hybrid to the opening.

YOUR GAIN

Contain fire and smoke. Simplify future cable changes.

Select the required fire rating and reinstate seals after cable changes.

02 CABLE + SERVICE FLOOR CROSSINGS



An open riser can carry fire from floor to floor.

CEA 2023 · REGULATION 38(3)(III)

Provide a fire barrier at each floor crossing of cable and service ducts in covered premises, including industrial installations.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

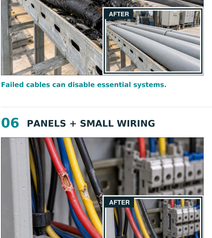
Mortar strength + mineral-wool boards: **load-bearing safety + easier cable retrofitting**. Matching **2-hour tested** hybrid assembly.

YOUR GAIN

Contain floor-to-floor fire spread. Ease cable changes.

Match the required floor rating and support detail. Keep other services out of power-cable ducts as prescribed.

03 BASEMENT SUBSTATION BOUNDARIES



A sealed room needs every cable opening protected.

CEA 2023 · REGULATION 46(2)(x)(e)

Where a basement substation is necessary, primary and secondary cable openings through walls and floors require **at least 2 hours** fire resistance.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

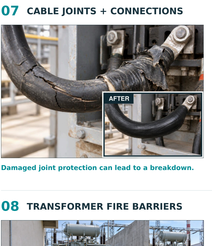
A matching **2-hour tested** hybrid combines mortar strength and mineral-wool boards for **load-bearing safety and easier cable retrofitting**.

YOUR GAIN

Protect the room boundary. Simplify cable retrofits.

Other prescribed wall, door, access, cable and oil-containment provisions also apply.

04 FIRE SPREAD ALONG CABLE GALLERIES



A cable fire can trip more than one generating unit.

CEA SAFETY AUDIT 2022 · 5.1.3(D)(3)

Provide the prescribed fire detection, alarm and protection systems in cable galleries.

STANVAC SOLUTION

EC 43 GENERAL

Added passive protection for sound cable sheaths. Reported **240-minute IEC 60332-3** flame-spread test at **1.6 mm**.

YOUR GAIN

Limit flame travel. Reduce exposure of adjoining cables.

The coating complements required gallery fire systems. Flame-spread testing does not establish circuit survival.

05 ESSENTIAL AUXILIARY CIRCUITS



Failed cables can disable essential systems.

CEA BOP DESIGN GUIDELINE · B.2.7.1

Specify fire-survival cables for identified essential duties, including fire alarms, DC switchgear supplies, battery feeds and emergency lighting.

STANVAC SOLUTION

EC 43 SURVIVAL

Retrofit proposal for approved cable systems: **240 min at 750°C** to IEC 60331-21; **180 min at 950°C** to IS 17505-1.

YOUR GAIN

Help essential circuits remain available during fire.

Submit the matching full-system report for project acceptance. Coating is not an automatic substitute for specified FS cables.

06 PANELS + SMALL WIRING



One bitten control wire can interrupt generation.

CEA 2023 · REGULATION 14(1)

Protect and maintain electrical lines and apparatus for safe operation under the installation's environmental conditions.

STANVAC SOLUTION

EC 7034 + FBS 73

Stanvac's added protection: flexible, translucent anti-rodent cable coating and reopenable entry-gap sealing. Wire colours remain visible.

YOUR GAIN

Reduce pest-related faults and contamination entry.

CEA does not prescribe these products. Repair damaged wiring first; preserve ventilation, contacts and clearances.

07 CABLE JOINTS + CONNECTIONS



Damaged joint protection can lead to a breakdown.

CEA 2023 · REGULATION 14(1)

Maintain electrical apparatus with sufficient insulation and mechanical strength for its duty and environment.

STANVAC SOLUTION

931B STRIPPEX INTUMESCENT

Flexible insulation + dust and water repellency on suitable repaired joints. Reported **120-minute IEC 60332** flame-spread test.

YOUR GAIN

Protect repaired joints against contamination and flame spread.

Correct electrical defects first. For HT, follow the approved 955 SL tape + coating system; preserve required clearances.

08 TRANSFORMER FIRE BARRIERS

Unprotected cable routes can bypass separation.

CEA 2023 · REGULATION 46(2)(xi)(a)

For oil-filled apparatus above 2,000 litres, provide separation/fire-barrier walls as prescribed, considering the adjacent building's fire rating.

STANVAC SOLUTION

EC 43 + FM 71 + FB250 HYBRID COMBO

Protect cable routes and openings. The hybrid combines mortar strength and mineral-wool boards for load-bearing safety and easier cable retrofitting.

YOUR GAIN

Help prevent a transformer incident spreading along cables.

Wall design is separate plant scope. Any penetration seal must preserve its required rating; 2 hours is not 4 hours.

09 TRANSFORMER FIRE RESPONSE

Response equipment also depends on its cable feeds.

CEA 2023 · REGULATION 46(2)(ix)

Provide automatic firefighting for transformers rated **10 MVA and above** and reactors rated **10 MVAR and above**.

STANVAC SOLUTION

EC 43 SURVIVAL + FM 71 + FB250 HYBRID COMBO

Protect response-system feeds and entries. The hybrid combines mortar strength and mineral-wool boards for load-bearing safety and easier cable retrofitting.

YOUR GAIN

Help keep response circuits available when needed.

Automatic detection and firefighting must still be designed, installed, maintained and tested.

10 FIRE DETECTION + ALARM CIRCUITS

Early detection is useful only if the signal gets through.

CEA SAFETY AUDIT 2022 · 5.1.2(I, S)

Provide the prescribed automatic detection and alarm systems, with strategic manual call points integrated into fire-control monitoring.

STANVAC SOLUTION

EC 43 SURVIVAL

Protect selected compatible signal and supply cable routes with a tested circuit-survival system, coordinated with the fire-system designer.

YOUR GAIN

Support alarm continuity and a timely fire response.

Do not coat LHS sensing cable or detector elements. Detectors, controls, power redundancy and drills remain essential.

THE TEST MUST MATCH THE PROTECTION YOU NEED.

0 BITES	240 MIN	240 MIN	2 HOURS
EC 7034	**EC 43 GENERAL**	**EC 43 SURVIVAL**	**FM 71 + FB250 HYBRID COMBO**
30-day rodent test ROSO/SPN/204 120-min flame test at 1.5 mm	Flame-spread test IEC 60332-3 1.6 mm test build	Circuit survival at 750°C IEC 60331-21 XLPE 4-core × 70 mm² / 1.6 mm	Hybrid firestop barrier IS 12458 Match the tested assembly

Performance figures are reported by Stanvac for specific tested systems. Obtain the matching test report and installation detail. IEC 60332 flame-spread resistance is different from IEC 60331 circuit survival.

START WITH YOUR MOST VULNERABLE AREA.

Send panel, cable-route and opening photos.

Ask Stanvac for a site survey, system specification and offer.

+91 85271 99811 **sales@stanvac.com** **stanvac.com**

CEA SOURCES Safety & Electric Supply Regulations 2023 · Thermal Plant Safety Audit, January 2022 · BOP Design Guideline, §B.2.7.1. Regulations, audit recommendations and project design guidance have different scope.

PRODUCT DETAILS PCO / EC 43 / EC 7034 / FBS 73 · FM 71 + FB250 HYBRID COMBO · 931B STRIPPEX

Selected electrical-fire applications, not a complete plant fire-safety checklist. Stanvac proposals do not imply mandatory endorsement or whole-plant compliance. Confirm site applicability, current requirements and approved system details. At-plant and application illustrations; "after" shows treatment, not proof of a real installation or fire-test result. Repair or replace defective cables before coating.