Stanvac®

Keeping People Safe. Keeping Plants Running.

GOVERNMENT OF INDIA

MINISTRY OF STEEL

SG/16 | FIRE SAFETY GUIDELINE

Rev. 00 | Effective 14 October 2019

Safety Guidelines for Iron & Steel Sector



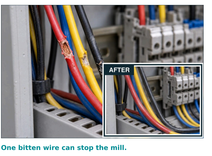
STEEL MILLS.

FIRE SAFETY. PRODUCTION PROTECTED.

Ministry guidance.
Stanvac technology. Your gain.

10 APPLICATIONS / PANELS · CABLES · OPENINGS · SUBSTATIONS

01 RODENTS IN CONTROL GEAR



One bitten wire can stop the mill.

SG/16 · 3.3.16(v)

Protect control gear against rodents, reptiles and insects.

STANVAC SOLUTION

EC 7034 + FBS 73

Translucent, flexible cable protection + reopenable entry-gap sealing. EC 7034: **0 bites** in the reported 30-day rodent test.

YOUR GAIN

Reduce bite-related faults. Keep wire colours visible.

Replace damaged wiring first. Coat sound sheaths; seal suitable gaps. Keep contacts and vents clear.

02 PANEL CABLE ENTRIES



An open entry gives fire a route into the panel.

SG/16 · 3.3.17(vii, x)

Above 230 V: coat **1 m below entry** and **1 m below terminations inside**, where space permits. At 33 kV and above, add an entry firestop.

STANVAC SOLUTION

EC 43 + FM 71 + FB250 HYBRID COMBO

Intumescent cable coating + a hybrid firestop barrier: mortar strength and mineral-wool boards for load-bearing safety and easier cable retrofitting.

YOUR GAIN

Limit fire entering or leaving critical switchgear.

1.6 mm dry-film thickness. Motor terminal boxes excluded; transformer terminal boxes included.

03 JOINTS + VERTICAL CABLES



Joints and risers can carry fire upwards.

SG/16 · 3.3.17(vii)

Coat **1 m on both sides of joints** and the **entire exposed vertical cable length**.

STANVAC SOLUTION

EC 43 / 931B STRIPPEX

EC 43 protects cable runs. 931B adds flexible, water-repellent insulation on suitable repaired joint exteriors; reported **120-minute IEC 60332** test.

YOUR GAIN

Protect vulnerable joints. Limit vertical fire spread.

Repair and test joints first. Specify the complete coating build; 931B alone is not a universal SG/16 substitute.

04 FIRE-PRONE CABLE ROUTES



Cable insulation can carry fire across the mill.

SG/16 · 3.3.17(viii)

Coat the **entire cable length** passing through a fire-prone area.

STANVAC SOLUTION

EC 43 GENERAL / SURVIVAL

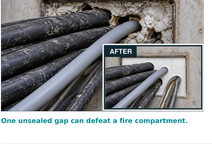
GENERAL limits flame spread. SURVIVAL protects circuit continuity on the matching tested cable system. Select the grade by duty.

YOUR GAIN

Reduce the risk of a local fire becoming a plant outage.

Full-route protection for survival duty. Coatings complement detection, suppression and safe cable routing.

05 CABLE OPENINGS + COMPARTMENTS



One unsealed gap can defeat a fire compartment.

SG/16 · 3.3.17(iv, v, ix)

Compartmentalise tunnels, seal cable entries and exits, and firestop cable-vault entries.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

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

YOUR GAIN

Contain fire and smoke. Retrofit cables more easily.

Match the tested wall, opening, cables and seal depth. Reinstate the seal after every cable change.

06 DETECTION + RESPONSE CIRCUITS



A fire can damage the cables needed to respond.

SG/16 · 3.3.17(xi, xii)

Provide automatic fire alarms for cable tunnels, vaults and trestles above 230 V; select suitable detection, including LHS where appropriate.

STANVAC SOLUTION

EC 43 SURVIVAL

Additional protection for selected alarm, pump and ventilation feeds. Tested system: **240 min at 750°C**, IEC 60331-21.

YOUR GAIN

Help critical response circuits keep working in fire.

Detectors, alarms, power supplies and firefighting remain separate required systems. Do not coat sensing elements.

07 UNIFORM COATING THICKNESS



Missed areas leave weak spots in the protection.

SG/16 · 3.3.17(x)

Achieve **1.6 mm dry-film thickness** uniformly on all exposed sides and along the specified length.

STANVAC SOLUTION

EC 43 + APPLICATION CONTROL

Build the coating to specification. Check every accessible side and verify dry-film thickness using an approved inspection method.

YOUR GAIN

Turn a paint application into measurable protection.

Record preparation, coat build, coverage and thickness at handover. Wet-film thickness is not dry-film thickness.

08 PERIODIC CABLE PROTECTION



Long cable routes connect separate risk areas.

SG/16 · 3.3.17(ix)

Above 230 V in tunnels/trays: coat **1 m every 30 m**. Treat cables up to 230 V within **2 m** of that route too.

STANVAC SOLUTION

EC 43 GENERAL

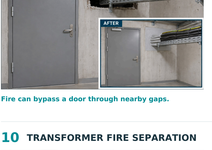
Survey and mark each required location. Form a continuous one-metre coated length on the specified cables, at the required build.

YOUR GAIN

Add targeted flame-spread protection along long routes.

Inset shows a 1 m coated length. Fire-prone areas need full-length coating; survival duty needs the complete route.

09 FIRE DOORS + ADJACENT OPENINGS



Fire can bypass a door through nearby gaps.

SG/16 · 3.3.17(xiii; iv, v)

Provide fire-rated doors inside cable premises and at entries/exits; maintain compartmentation and seal cable openings.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

Mortar strength + mineral-wool boards provide **load-bearing safety and easier cable retrofitting** at cable penetrations.

YOUR GAIN

Preserve the compartment. Simplify cable changes.

The certified door, frame and hardware are separate plant scope. Firestop rating must suit the approved compartment.

10 TRANSFORMER FIRE SEPARATION



Cable routes can carry fire beyond a transformer.

SG/16 · 3.3.16(viii)(a)

For oil-filled installations above 2,000 litres, provide **4-hour baffle walls** in the specified separation situations.

STANVAC SOLUTION

EC 43 + FM 71 + FB250 HYBRID COMBO

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

YOUR GAIN

Help restrict secondary cable fires and wider damage.

The engineered 4-hour wall is separate plant scope. A 2-hour seal does not create a 4-hour wall.

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 ROSOS/PK/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.

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MINISTRY SOURCE SG/16, Rev. 00, effective 14 October 2019, §§3.3.16–3.3.17. Clause summaries are paraphrased.

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 ministry endorsement or whole-plant compliance. Confirm site applicability, current requirements and approved system details. AI plant and application illustrations; "after" shows treatment, not proof of a real installation or fire-test result. Repair or replace defective cables before coating.