GOVERNMENT OF INDIA

MINISTRY OF RAILWAYS

RESEARCH DESIGNS & STANDARDS ORGANISATION

RDSO/WKS/2018/2

RRI / Control Room with Firefighting Provision | January 2019

Government guideline for railway relay-interlocking and control-room buildings



RAILWAY CONTROL ROOMS.

FIRE SAFETY. SIGNALLING PROTECTED.

Government guidance.
Stanvac technology. Your gain.

6 APPLICATIONS / RELAY ROOMS · CABLES · OPENINGS · ALARM CIRCUITS

01 RELAY-ROOM WALL OPENINGS



An unsealed entry lets fire and smoke reach the relay room.

RDSO/WKS/2018/2 · 3.10(c)

Seal service penetrations through walls and floors of gas-protected enclosures.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

Mortar strength + mineral-wool boards: **load-bearing safety + easier cable retrofitting**, with the specified supports and tested assembly.

YOUR GAIN

Protect room boundaries. Keep cable changes manageable.

Match the tested opening and required fire rating. Gas-suppression enclosure integrity must be verified separately.

02 FLOOR + CABLE-VOID PENETRATIONS



An open floor penetration links separate fire areas.

RDSO/WKS/2018/2 · 3.10(c)

The enclosure-sealing guidance also covers cable, duct and pipe openings through floors.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

Use the matching **2-hour tested hybrid** where suitable: mortar strength and mineral-wool boards with provision for cable re-entry.

YOUR GAIN

Limit fire spread through floor openings. Simplify retrofits.

Match orientation, services, seal depth and support detail. Reinstate the barrier after every cable change.

03 FIRE SPREAD ALONG ROOM CABLES



A small cable fire can disable an entire signalling room.

RDSO/WKS/2018/2 · SECTION 6

Discusses intumescent coatings as a means of delaying fire spread and heat reaching suitable substrates.

STANVAC SOLUTION

EC 43 GENERAL

Stanvac's cable-specific proposal: protect sound sheaths with a system reporting **240-minute IEC 60332-3** flame-spread performance at **1.6 mm**.

YOUR GAIN

Limit flame travel through dense cable routes.

This is an application proposal, not an RDSO-approved product claim. Obtain project acceptance for cable type, loading and installation.

04 POWER-ROOM JOINTS + TERMINATIONS



Damaged joint protection can become a fire starting point.

RDSO/WKS/2018/2 · SECTION 6.2

Addresses electrical-fire causes and prevention, including overheating and unsafe temporary connections.

STANVAC SOLUTION

931B STRIPPEX INTUMESCENT

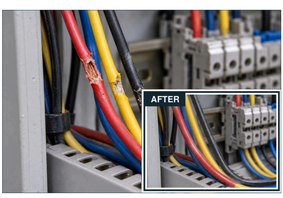
Protect suitable repaired joint exteriors with **flexible insulation + dust and water repellency**. Reported **120-minute IEC 60332** test.

YOUR GAIN

Reduce contamination at repaired joints. Add flame-spread resistance.

First correct overheating, loose connections and damaged insulation. Do not coat contacts, relay mechanisms or ventilation paths.

05 RODENT EXPOSURE AT CABLE ENTRIES



One bitten wire can interrupt signalling.

RDSO/WKS/2018/2 · SECTION 6

Calls for cable entrances to equipment housings to exclude moisture, rodents, termites and insects, with removable seals.

STANVAC SOLUTION

EC 7034 · ADDED CABLE PROTECTION

Flexible, translucent anti-rodent coating on sound cable sheaths. Reported **0 bites in a 30-day test**; wire colours remain visible.

YOUR GAIN

Reduce bite-related faults in vulnerable wiring.

Cable coating supplements the required entrance seal. Use FM 71 + FB250 at fire-rated building penetrations; confirm re-entry and rating details.

06 FIRE-DETECTION + RESPONSE FEEDS



A detector is useful only if its signal reaches the system.

RDSO/WKS/2018/2 · SECTION 8

Provides guidance for automatic fire detection and alarm systems in these installations.

STANVAC SOLUTION

EC 43 SURVIVAL

Additional protection for selected, compatible response-circuit cables. Reported **240 min at 750°C**, IEC 60331-21, on the tested system.

YOUR GAIN

Support alarm continuity and timely response.

Retain approved detection, suppression and backup power. Do not coat detectors, sensing cables or sampling holes. Obtain railway acceptance.

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 RDSO/SPN/204 Sound cable sheaths only	Flame-spread test IEC 60332-3 1.6 mm test build	Circuit survival at 750°C IEC 60331-21 4-core × 70 mm² XLPE / 1.6 mm	Penetration firestop IS 12458 Match the tested assembly

Performance figures are reported by Stanvac for specific tested systems. Obtain the matching test report and installation detail. Flame-spread resistance, circuit survival and penetration fire resistance are different performances.

START WITH YOUR MOST VULNERABLE AREA.

Send cable-route, panel and opening photos.

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

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GOVERNMENT SOURCE RDSO/WKS/2018/2, January 2019: Guideline on Construction of RRI Room / Control Room with Firefighting Provision; §§3.10, 6 and 8. Clause summaries are paraphrased.

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

Building applications for RRI / control rooms. Confirm current Railway Board, zonal and tender requirements. Product proposals require railway acceptance; they are not RDSO product approvals or rolling-stock specifications.

Selected sales applications, not a complete fire-safety checklist. Stanvac proposals do not imply government endorsement or whole-facility compliance. Al sector and application illustrations; "after" shows treatment, not a verified installation or fire-test result. Repair or replace defective cables before coating.