GOVERNMENT OF INDIA

MINISTRY OF PETROLEUM & NATURAL GAS

PETROLEUM AND NATURAL GAS REGULATORY BOARD

PNGRB SAFETY REGULATIONS 2023

Refineries + Gas Processing Plants | Consolidated to 16 January 2026

Includes the January 2026 amendment on cables in the Fire Scenario Envelope



REFINERIES + GAS PROCESSING.

FIRE SAFETY. PRODUCTION PROTECTED.

Government guidance.
Stanvac technology. Your gain.

6 APPLICATIONS / CABLE ROUTES · JOINTS · OPENINGS · RESPONSE CIRCUITS

01 FIRE SPREAD ALONG CABLE ROUTES



Cable insulation can carry fire beyond the first incident.

PNGRB 2023 · 5.21.1(j)

Recommends cable fire-retardant coatings and tapes as passive protection, **where required**.

STANVAC SOLUTION

EC 43 GENERAL

Coat suitable existing cable sheaths. Reported **240-minute IEC 60332-3** flame-spread test at **1.6 mm**.

YOUR GAIN

Limit flame travel. Reduce the risk of a wider shutdown.

Select by fire exposure. IEC 60332 flame-spread testing alone does not establish hydrocarbon-fire suitability.

02 VULNERABLE CABLE JOINTS



Poorly protected joints invite repeat failures.

PNGRB 2023 · 4.9.4(b)(xi) + 5.21.1(j)

Avoid joints where practicable; assess and monitor above-ground joints in hazardous areas.

STANVAC SOLUTION

931B STRIPPEX INTUMESCENT

Added protection on suitable **repaired joint exteriors**: insulation, dust and water repellency, and reported **120-minute IEC 60332** flame-spread resistance.

YOUR GAIN

Protect repaired joints. Reduce contamination and flame spread.

Repair and test first. Use the approved tape + coating system for HT. Coating does not replace flameproof glands or hazardous-area requirements.

03 OPENINGS THROUGH FIRE SEPARATION



One open cable gap can bypass a fire-separation wall.

PNGRB 2023 · 5.21.1(c)

Identifies fire-separation walls for substations, transformer bays and cable galleries as passive measures where required.

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

Preserve separation at cable openings. Ease future cable changes.

Stanvac penetration-seal proposal. Match the wall rating, opening and services; a 2-hour tested seal cannot establish a higher wall rating.

04 CONTROL-ROOM CABLE PENETRATIONS



Open service gaps weaken a protected control room.

PNGRB 2023 · 5.3.8(a)

Recommends automatic gas-based detection and extinguishing for relevant equipment in control rooms and satellite rack rooms.

STANVAC SOLUTION

FM 71 + FB250 HYBRID COMBO

Added passive protection at cable openings. The hybrid combines **mortar strength + re-enterable mineral-wool boards**.

YOUR GAIN

Help contain fire and smoke around critical control equipment.

Keep the required suppression system. Fire rating alone does not prove gas tightness; validate enclosure integrity separately.

05 FIRE-STATION + FIRE-PUMP FEEDS



Fire response depends on its electrical supply.

PNGRB 2023 · 5.20.1(c)(iv)

Requires emergency power for the fire station and fire-water pump house.

STANVAC SOLUTION

EC 43 SURVIVAL

Additional protection for accepted cable systems. Reported **240 min at 750°C**, IEC 60331-21; **180 min at 950°C**, IS 17505-1.

YOUR GAIN

Help response circuits remain available during fire.

Retain emergency power and redundancy. Match the complete cable system, exposure and route to the project specification.

06 CABLES IN HYDROCARBON FIRE ZONES



A flame-spread coating is not proof of hydrocarbon protection.

PNGRB · 4.9.4(a)(viii) · AMENDED 16 JAN 2026

Cables within the **Fire Scenario Envelope** require fireproofing in accordance with **API 2218**.

STANVAC SOLUTION

EC 43 · PROJECT QUALIFICATION

Submit the proposed system for an engineering review of **exposure, duration and circuit duty**. Supply only against an accepted protection specification.

YOUR GAIN

Specify protection for the actual fire scenario.

The IEC / IS results shown here do not by themselves prove API 2218 suitability. Hydrocarbon and jet-fire duties need the relevant evidence.

THE TEST MUST MATCH THE PROTECTION YOU NEED.

120 MIN	240 MIN	240 MIN	2 HOURS
931B STRIPPEX	**EC 43 GENERAL**	**EC 43 SURVIVAL**	**FM 71 + FB250 HYBRID COMBO**
Flame-spread test IEC 60332 Repair joints before coating	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 PNGRB Refineries and Gas Processing Plants T4S Regulations 2023, consolidated to 16 January 2026. Referenced clauses are paraphrased; "shall" requirements and "should" recommendations retain their distinct scope.

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

Selected applications for covered refineries and gas-processing plants. Confirm facility scope, Fire Scenario Envelope and current project requirements. The shown IEC / IS results alone do not establish API 2218 or jet-fire suitability.

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