



FLAME RESISTANT CLOTHING
INCLUSIVE OF RAIN WEAR AND
HIGH VISIBILITY VEST
STANDING INSTRUCTIONS

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1 GENERAL INFORMATION

1.1 DENOVO

DeNovo is an energy company focused on meeting the energy needs of Trinidad and Tobago. DeNovo is the owner of Block 1(a) located offshore in the west coast of Trinidad. DeNovo currently produces natural gas from the Iguana and Zandolie fields in Block 1(a) from four (4) shallow water wells with two (2) unmanned platforms and a 45km pipeline to DeNovo's Gas Processing Unit which is located onshore.

1.2 WINNING STATEMENT

We make a difference by safely, rapidly, and efficiently developing and operating greenfield and brownfield assets utilizing green technologies and automated processes (designed and built to industry standards) in order to deliver competitive energy molecules, all done through highly enrolled and empowered DeNovians.

2 PURPOSE

The purpose of this standing instructions is to communicate the guidance on the requirements for Flame Resistant Clothing, Rain Wear and High Visibility Vest.

3 BACKGROUND

The use of flame-resistant clothing (FR) is a requirement for DeNovo's site. Currently, shirts and trousers are being used, however, the organization has now moved to adopt the use of one-piece coveralls only. This was established to mitigate against the risk of gas vapours, seeping through the separation in garments (shirt and trousers) when working in an environment where the risks of gas exposure are significant.

Additionally, the organization shall not permit workers to wear non-flame-resistant clothing over flame-resistant garments. As such, all additional PPE required to be worn over FR shall be FR-rated (e.g., high-visibility vests, raincoats, etc.). It is advised to select suitable material to wear beneath FR-rated clothing, as synthetic fabrics can contribute to severe burns and injury if they come into contact with fire, as they tend to melt and stick to the skin, exacerbating injuries. In contrast, cotton does not melt under heat and provides a safer option for layering beneath FR garments.

Coveralls provide a continuous barrier, thus minimizing the number of seams and openings where gas vapours could penetrate. In contrast, a shirt and pants setup can have gaps at the waist or between layers.

Coveralls are designed to fit snugly at the wrists, ankles, and neck, reducing the chances of vapours seeping in. Separate garments may not seal as effectively, leading to potential exposure.

4 EFFECTIVE DATE

This SI will be effective from 1st March 2025 and will be adhered to by all persons, i.e., employees, contractors, and visitors required on anyone of DeNovo's facility.

5 DESCRIPTION

The use of flame resistant personal protective equipment (PPE) at DeNovo is guided by the National Fire Protection Association (NFPA) requirements (NFPA 2112 & 2113) and so, as per the guidance outlined in NFPA 2113 section 5.1.6

to 5.1.8, all clothing, PPE or other accessories worn over flame resistant clothing (e.g., rain wear, high visibility vest, chemical protection suit/aprons, etc.) must also be flame resistant.

The use of non-flame-resistant apparel over flame resistant PPE compromises the ability of the flame-resistant material to deliver the required protection.

In alignment with this requirement, and to ensure that the PPE user is kept protected from the effects of a flash fire at all times while executing work in rainy conditions within the process area of the Gas Processing facility and offshore installations, the following requirements shall apply:

5.1 FLAME RESISTANT RAINWEAR

The protective rain wear that is to be used shall meet the testing requirements as outlined in:

- ASTM F 2733 - Standard Specification for Flame Resistant Rainwear for Protection Against Flame Hazards.

If there is the chance of exposure to Arc flash from electrical equipment, then it shall meet the requirements of:

- ASTM F 1891-12 - Standard Specification for Arc and Flame-Resistant Rainwear.

Additional minimum requirements shall consist of the following:

- Flame resistant rain jacket and rain bib overall.
- It shall be constructed of inherently flame-resistant material and not be chemically treated.
- It shall be breathable and ventilated so it can be worn comfortably for extended periods.
- It shall be available in different sizes to ensure that a proper fit is achieved and does not interfere with movement.
- It shall be constructed from high-visibility material that meets ANSI/ISEA 107-2010 - American National Standard for High-Visibility Safety Apparel and Headwear.
- It shall be constructed of materials (stitching's, tapes, coatings, fasteners, and closure materials) that minimize heat conduction. If metal fasteners and closures are used, they shall be covered with a layer of rainwear material on the inside of the garment such that these items will not contact undergarments or skin.
- It shall be equipped with a hood to keep rain out of the eyes.
- It shall have 1 1/2" Reflective strips on arms, back, chest, legs.
- It shall be vented at the back with 'D' ring access.
- It shall have take-up tabs on cuffs.
- It shall have a manufacturer label which states size, catalogue number, manufacturer's name, and notation of conformance to ASTM F 2733, and the label are permanently affixed in each rainwear item.

5.2 FLAME RESISTANT HIGH VISIBILITY VEST

Flame Resistant High Visibility Safety Vest shall consist of the following requirements:

- NFPA 2113 requirements section 5.1.9.
- NFPA 70E HRC I.
- Minimum Arc Rating of ATPV 5 calories/cm².
- High visibility design conformance to ANSI/ISEA 107-2010 or EN 471:2003 or 89/686/EEC.
- 5 oz or higher Flame-Resistant material.
- 100% Modacrylic (ASTM F1506 standard) or NOMEX Fire Resistant ASTM & 70E ARC Fabric (ASTM F1930, D-6413, D4108-87, F1939-99A, F1930-99, F1958 & F1959 Thermal tests).
- Class 2 Level 2 Compliant.
- 2" FR silver retro reflective striping.
- One 360-degree horizontal stripe and two vertical shoulder stripes.
- 360-degree visibility.
- Short waste to allow access to tool belts and pockets.
- Close fitting to prevent snagging on protruding objects.

- 5-point breakaway design to assist if snagged or caught.
- Velcro closure.
- FR thread, binding, and closure.
- Various sizes (S, M, L, XL, XXL, XXXL).

6 AFFECTED DOCUMENT

The contents of this Standing Instructions shall be included to the revised PPE procedure.