

CONTECComissão de Normalização
Técnica**SC-16**

Industrial Safety

Safety Work at Heights**1st Amendment**

This is the 1st Amendment to PETROBRAS N-2910 REV. B, and it is used to alter the text of the Standard in the part(s) indicated below:

NOTE 1 The new(s) page(s) with the performed amendment(s) is (are) placed in its corresponding position(s).

NOTE 2 The amended pages, indicated the date of the amendment, are placed at the end of this standard, in chronological order, and shall not be used.

CONTENTS OF THE 1st AMENDMENT - 06/2015

- Subsection 4.7:

Include of the Note 2.

Safety Work at Heights

Procedure

This Standard replaces and cancels its previous revision.

The CONTEC - Authoring Subcommittee provides guidance on the interpretation of this Standard when questions arise regarding its contents. The Department of PETROBRAS that uses this Standard is responsible for adopting and applying the sections, subsections and enumerates thereof.

Technical Requirement: A provision established as the most adequate and which shall be used strictly in accordance with this Standard. If a decision is taken not to follow the requirement ("non-conformity" to this Standard) it shall be based on well-founded economic and management reasons, and be approved and registered by the Department of PETROBRAS that uses this Standard. It is characterized by imperative nature.

Recommended Practice: A provision that may be adopted under the conditions of this Standard, but which admits (and draws attention to) the possibility of there being a more adequate alternative (not written in this Standard) to the particular application. The alternative adopted shall be approved and registered by the Department of PETROBRAS that uses this Standard. It is characterized by verbs of a nonmandatory nature. It is indicated by the expression: **[Recommended Practice]**.

Copies of the registered "non-conformities" to this Standard that may contribute to the improvement thereof shall be submitted to the CONTEC - Authoring Subcommittee.

Proposed revisions to this Standard shall be submitted to the CONTEC - Authoring Subcommittee, indicating the alphanumeric identification and revision of the Standard, the section, subsection and enumerate to be revised, the proposed text, and technical/economic justification for revision. The proposals are evaluated during the work for alteration of this Standard.

"This Standard is exclusive property of Petróleo Brasileiro S. A. - PETROBRAS, internal application and PETROBRAS Subsidiaries and shall be used by its suppliers of goods and services under contracts or similar under the conditions established in Bidding, Contract, Agreement or similar.

The use of this Standard by other companies / organizations / government agencies and individuals is the sole responsibility of the users.."

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Introduction

PETROBRAS Technical Standards are prepared by Working Groups - WG (consisting specialized of Technical Collaborators from Company and its Subsidiaries), are commented by Company Units and its Subsidiaries, are approved by the Authoring Subcommittees - SCs (consisting of technicians from the same specialty, representing the various Company Units and its Subsidiaries), and ratified by the Executive Nucleus (consisting of representatives of the Company Units and its Subsidiaries). A PETROBRAS Technical Standard is subject to revision at any time by its Authoring Subcommittee and shall be reviewed every 5 years to be revalidated, revised or cancelled. PETROBRAS Technical Standards are prepared in accordance with PETROBRAS Technical Standard [N-1](#). For complete information about PETROBRAS Technical Standards see PETROBRAS Technical Standards Catalog.

Foreword

This Standard is the English version (issued in 04/2015) of PETROBRAS N-2910 REV. B 01/2015. In case of doubt, the Portuguese version, which is the valid document for all intents and purposes, shall be used.

1 Scope

1.1 This Standard defines the supplementary requirements to [NR-18](#) (item about protection measures against falls from heights) and [NR-35](#) for works performed on heights.

1.2 The application of this Standard for System units of PETROBRAS headquartered abroad shall have as its principle and shall comply with the local law, as well as other applicable requirements. It is established that all Brazilian laws and references in force and highlighted by this Standard serve as input to the adaptation process

1.3 This Standard is pertaining to procedures started as from its edition.

1.4 This Standard only contains Technical Requirements.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies.

Norma Regulamentadora nº 12 ([NR-12](#)) - Segurança no Trabalho em Máquinas e Equipamentos;

Norma Regulamentadora nº 18 ([NR-18](#)) - Condições e Meio Ambiente de Trabalho na Indústria da Construção;

Norma Regulamentadora nº 34 ([NR-34](#)) - Condições e Meio Ambiente de Trabalho na Indústria da Construção e Reparação Naval;

Norma Regulamentadora nº 35 ([NR-35](#)) - Trabalho em Altura;

PETROBRAS [N-2162](#) - Work Permit;

ABNT [NBR 14626](#) - Equipamento de Proteção Individual Contra Queda de Altura - Trava-Queda Deslizante Guiado em Linha Flexível;

ABNT [NBR 14627](#) - Equipamento de Proteção Individual Contra Queda de Altura - Trava-Queda Guiado em Linha Rígida;

ABNT [NBR 15475](#) - Acesso por Corda - Qualificação e Certificação de Pessoas;

ABNT [NBR 15595](#) - Acesso por Corda - Procedimento para Aplicação do Método;

ABNT [NBR 15986](#) - Cordas de Alma e Capa de Baixo Coeficiente de Alongamento para Acesso por Cordas - Requisitos e Métodos de Ensaio;

ASME [B 30.5](#) - Mobile and Locomotive Cranes.

NOTE For documents referred in this Standard and for which only the Portuguese version is available, the PETROBRAS department that uses this Standard should be consulted for any information required for the specific application.

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1

reference floor

surface immediately under the work area

3.2

anchor point

point made to support charge of people for connection of safety devices, such as ropes, steel cable, fall arrester and safety strap

3.3

temporary anchor point

that one evaluated and selected to be used temporarily for the support of people during some service

3.4

fall protection system

group of devices aiming to guarantee safe work conditions on heights, such as life rope, fall arresters, safety strap, energy absorber

3.5

fall zone

space between the anchor point and the nearest reference floor or obstacle

4 General Conditions

4.1 The local access shall not be considered work on heights. However, considering the environment conditions, specific fall protection Personal Protective Equipment (EPI, with for abbreviature in Portuguese) may be provided after performed the risk evaluation.

4.2 In the planning step the following requirements shall be taken:

- a) define activity execution procedure;
- b) foresee the local access for work and to its evacuation or rescue in case of emergency;
- c) consider charge, equipment and material movement;
- d) select anchor points and support from the hoisting system in the structure;
- e) evaluate storage conditions in the elevated workplace;
- f) evaluate the suport structure stability;
- g) consider the risk associated to electric installations (see Table 1) excavations, floor type and resistance, existence of underground lines, presence of gas, simultaneous works, confined spaces, overseas works, among others;
- h) foresee area signaling and insulation under the workplace;
- i) consider fall zone;
- j) define minimum environmental conditions for the operation realization (visibility, wind speed, rain, environmental temperature, lightning, sea conditions and night work);
- k) foresee tools and equipment inspection
- l) foresee communication means;