

CONTECComissão de Normalização
Técnica**SC-12**

General Design Standards

Identification Of Industrial Equipment**3rd Amendment**

This is the 3rd Amendment to PETROBRAS N-1521 REV. F, incorporated the 2nd amendment 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 - 08/2005

Incorporated into the text of the standard.

CONTENTS OF THE 2nd AMENDMENT - 04/2008

- Section 2:

Inclusion of [ET-3010.00-1200-200-PMT-001](#).

- Subsection 1.3:

Change the reference I-ET-3010.00-1200-200-PMT-001 to [ET-3010.00-1200-200-PMT-001](#).

- Section 6:

Exclusion of the section.

CONTENTS OF THE 3rd AMENDMENT - 06/2016

- ANNEX A - TABLE A-1:

Change in DE symbol equipment.

CONTEC

Comissão de Normalização
Técnica

SC-12

General Design Standards

Identification of Industrial Equipment

Revalidation

Revalidated in 01/2012.

IDENTIFICATION OF INDUSTRIAL EQUIPMENT

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 clauses 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 the verb forms "shall," "it is necessary...", "is required to...", "it is required that...", "is to...", "has to...", "only ... is permitted," and other equivalent expressions having an 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 the verbal form "should" and equivalent expressions such as "it is recommended that..." and "ought to..." (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 clause(s) to be revised, the proposed text, and technical/economic justification for revision. The proposals are evaluated during the work for alteration of this Standard.

"The present Standard is the exclusive property of PETRÓLEO BRASILEIRO S.A. - PETROBRAS, for internal use in the Company, and any reproduction for external use or disclosure, without previous and express authorization from the owner, will imply an unlawful act pursuant to the relevant legislation through which the applicable responsibilities shall be imputed. External circulation shall be regulated by a specific clause of Secrecy and Confidentiality pursuant to the terms of intellectual and industrial property law."

Foreword

PETROBRAS Technical Standards are prepared by Working Groups - GTs (consisting of specialists from PETROBRAS and its Subsidiaries), are commented by PETROBRAS Units and PETROBRAS Subsidiaries, are approved by the Authoring Subcommittees - SCs (consisting of specialists from the same specialty, representing the various PETROBRAS Units and PETROBRAS Subsidiaries), and ratified by the Executive Nucleus (consisting of representatives of the PETROBRAS Units and PETROBRAS 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 standard PETROBRAS N-1. For complete information about PETROBRAS Technical Standards see PETROBRAS Technical Standards Catalog.

CONTEC
Comissão de Normalização
Técnica

SC - 12
General Design Standards

SUMMARY

1 SCOPE	3
2 SUPPLEMENTARY DOCUMENTS	3
3 SYSTEMATIC PROCEDURE FOR IDENTIFICATION	4
4 DESCRIPTION OF IDENTIFICATION ELEMENTS.....	4
4.1 EQUIPMENT SYMBOL	4
4.2 IDENTIFICATION OF AREA OR UNIT.....	4
4.3 SEQUENTIAL IDENTIFICATION OF EQUIPMENT WITHIN THE AREA OR UNIT	5
4.3.1 EXAMPLE 1	5
4.3.2 EXAMPLE 2	5
4.3.3 EXAMPLE 3.....	5
4.4 INDIVIDUAL IDENTIFICATION OF EACH EQUIPMENT	5
4.5 JOINT IDENTIFICATION OF EQUIPMENT HAVING THE SAME FUNCTION	6
5 IDENTIFICATION OF EQUIPMENT	6
5.1 GENERAL EQUIPMENT	6
5.2 DRIVING EQUIPMENT	6
5.2.1 EXAMPLE 1	6
5.2.2 EXAMPLE 2.....	6
5.3 SUBSTATION AND EQUIPMENT.....	7
5.3.1 MAIN SUBSTATION	7
5.3.2 AUXILIARY SUBSTATION	7
5.3.3 EQUIPMENT BELONGING TO SUBSTATION	7
5.4 AUXILIARY EQUIPMENT	8
5.5 PACKAGE UNITS	10
6 BIBLIOGRAPHY	11
ANNEX A - LIST OF EQUIPMENT CLASS SYMBOLS	12

TABLES

TABLE A-1 - LIST OF EQUIPMENT SYMBOLS IN ALPHABETICAL ORDER	12
TABLE A-2 - LIST OF SYMBOLS FOR UNITS (PACKAGE SYSTEM) IN ALPHABETICAL ORDER	16
TABLE A-3 - LIST OF EQUIPMENT IN ALPHABETICAL ORDER	17

FOREWORD

This Standard is the English version (issued in AUG/2005) of Standard PETROBRAS N-1521 REV. F JAN/2005, including its Amendment - AUG/2005.

1 SCOPE

1.1 This Standard establishes the conditions required for the identification of equipment belonging to industrial facilities of PETROBRAS.

1.2 This Standard applies to industrial equipment belonging to the industrial flow of one of the following areas:

- a) process;
- b) utilities;
- c) interconnections;
- d) pumping or compression facilities;
- e) tank farms;
- f) terminals;
- g) gathering stations;
- h) offshore drilling and production units and other complementary systems.

1.3 This Standard does not apply to measurement and control instruments, which are identified according to standard ISA [S 5.1](#), nor to the identification of piping, which shall comply with standard PETROBRAS [N-1522](#) (except offshore production facilities which are governed by [ET-3010.00-1200-200-PMT-001](#)).

1.4 This Standard is only applied to works started as of its date of issuance.

1.5 This Standard contains Technical Requirements and Recommended Practices.

2 SUPPLEMENTARY DOCUMENTS

The documents listed below and contain valid requirements for the present Standard.

- | | |
|--|--|
| Portaria nº 3214 , de 08/06/1978 | - Alterada pela Portaria nº 23 , de 27/12/1994 - Norma Regulamentadora nº 13 (NR-13) - Caldeiras e Vasos de Pressão; |
| PETROBRAS N-1018 | - Identificação de Tanque e de Vaso de Pressão; |
| PETROBRAS N-1278 | - Numerals and Letters for Equipment Identification; |
| PETROBRAS N-1522 | - Identificação de Tubulações Industriais; |
| PETROBRAS N-1710 | - Codificação de Documentos Técnicos de Engenharia; |
| ET-3010.00-1200-200-PMT-001 | - Padrões de Material de Tubulação para Instalações de Produção e Processamento de petróleo; |
| ISA 5.1 | - Instrumentation Symbols and Identification Formerly. |

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 SYSTEMATIC PROCEDURE FOR IDENTIFICATION

3.1 In all documents pertaining to an industrial equipment or in documents where reference is made to an industrial equipment, the industrial equipment shall be identified according to items 3.2 and 5.1. Whenever possible, the identification shall be applied to the equipment itself, according to standards PETROBRAS [N-1018](#) and [N-1278](#).

3.2 All equipment shall be individually identified by an alphanumeric combination composed of the following elements:

- a) equipment symbol (see Note);
- b) identification of the area or unit where the equipment is located;
- c) sequential identification of the equipment within the area or unit;
- d) individual identification of each equipment (when applicable).

Note: The following symbols shall not be used, because they are part of the “Equipment Registration System”: BA, BD, BF, BG, BO, BS, CA, CC, EI, LE, ME and MS.

4 DESCRIPTION OF IDENTIFICATION ELEMENTS

4.1 Equipment Symbol

4.1.1 The equipment symbol shall be composed of 1 to 3 capital letters. ANNEX A of this Standard is a list of the equipment symbols.

4.1.2 For equipment not included in the list of ANNEX A, a new symbol shall be requested from the Authoring CONTEC Subcommittee.

4.2 Identification of Area or Unit

4.2.1 The identification of the area or unit within the industrial facility where the equipment is located shall be comprised of a group of numbers.

4.2.2 The identification of the area or unit shall follow one of the following criteria, according to the guideline established by the department responsible for operation of the facility:

- a) according to Annex C of standard PETROBRAS [N-1710](#): Area of Activity;
- b) according to Annex B of standard PETROBRAS [N-1710](#): Identification of Facilities;
- c) identification system already adopted for existing facilities.

4.3 Sequential Identification of the Equipment within the Area or Unit

The identification of the equipment within the area or unit is composed of 3 numbers in numerical sequence from 001 to 999.

4.3.1 Example 1

TQ-6300005

It means:

5th tank (TQ) of area 6300 (example in Annex C of standard PETROBRAS [N-1710](#) - paragraph a) of item 4.2.2 of this Standard).

4.3.2 Example 2

SD-3122.08005

It means:

5th condensate separator belonging to facility 3122.08 (example according to Annex B of standard PETROBRAS [N-1710](#) - paragraph b) of item 4.2.2 of this Standard).

4.3.3 Example 3

TQ-4100005

It means:

5th tank (TQ) of area 4100 (using an existing coding - paragraph c) of item 4.2.2 of this Standard).

4.4 Individual Identification of Each Equipment

It shall be composed of a capital letter, starting with A, and shall only be used in those cases in which there are 2 or more equipment with the same function and located in the same area or unit; the letter shall be placed after the number, without separation. Gas storage tanks (TQ), cylinders (CN, LP, LR, RP) and spheres (EF) are an exception only in the Downstream area. A different numerical identification shall be given to each equipment, with the final letter for individual differentiation being dispensed with. Examples:

P-2211002A
P-2211002B

It means:

2 identical heat exchangers (P) with the same function (A and B), having the same sequential number 002, belonging to area 2211 (example according to Annex C of standard PETROBRAS [N-1710](#)).

4.5 Joint Identification of Equipment Having the Same Function

In those cases where it is necessary to summarize in a single identification equipment with the same function and located in the same area or unit, the character “/” shall be used for separating the first from the last existing one. In case one or more intermediate equipment does not exist, the character “#” shall be used for separation. Example:

In a unit in which there are 8 (eight) pig launchers LP-1223001A, LP-1223001B, LP-1223001C, LP-1223001D, LP-1223001E, LP-1223001F, LP-1223001G, and LP-1223001H, the summarized identification of the group shall be LP-1223001A/H.

Note: In case the equipment LP-1223001B, LP-1223001D, and LP-1223001E do not exist, the summarized identification of the group shall be LP-1223001A#C#F/H.

5 IDENTIFICATION OF EQUIPMENT

5.1 General Equipment

The identification elements of the equipment shall be written in the sequence indicated in item 3.2. There shall be a hyphen between the equipment symbol and the rest of the identification. The rest of the identification shall be written without separation, except when it is necessary to use graphic symbols such as “-”, “/” or “#”, where permitted.

5.2 Driving Equipment

The identification shall be composed of the symbol for the driving equipment followed by the identification of the driven equipment, the 2 parts being separated by a hyphen.

5.2.1 Example 1

M-B-6210002

It means:

Electric motor (M) which drives the second (002) pump (B) which belongs to area 6210 (example according to Annex C of standard PETROBRAS [N-1710](#)).

5.2.2 Example 2

TS-GE-5140001

It means:

Gas Turbine (TS) which drives the first (001) electric power generator (GE) of area 5140 (example according to Annex C of standard PETROBRAS [N-1710](#)).

5.3 Substation and Equipment

5.3.1 Main Substation

The identification shall be comprised of the substation symbol (SE) followed by a hyphen and the identification of the area corresponding to the “main substation” or “utilities center”, according to the location of the main substation: in a proper area or in the utilities center. Example:

SE-BBBBXXX

It means:

Main substation located in a proper area (area “BBBB”, corresponding to Annex C of standard PETROBRAS [N-1710](#) and “XXX” to the sequential number of the Substation).

5.3.2 Auxiliary Substation

5.3.2.1 The identification shall be composed of the substation symbol (SE) followed by a hyphen and the identification of the area or unit served by the substation.

5.3.2.2 When an auxiliary substation serves more than one area or unit, it receives the identification of the predominant one. Example:

SE-5130001

It means:

Substation (SE) of area 5130, which is the predominant one among the areas served by the substation (example according to Annex C of standard PETROBRAS [N-1710](#)).

5.3.3 Substation Equipment

The identification shall be composed of the equipment symbol followed by the same identification of the area or unit used for the substation and then followed by 3 numbers which in numerical sequence from 001 to 999 identify the equipment within the substation. The symbol of the equipment class is separated from the identification of the area or unit by a hyphen. Whenever there are various identical equipment item with the same function, they shall be differentiated by a capital letter, starting with A, placed after the 3 numbers mentioned.

5.3.3.1 Example 1

TF-5310001

It means:

First (001) transformer (TF) of the substation of area 5310.

5.3.3.2 Example 2

TF-5310001A

TF-5310001B

It means:

2 identical transformers (TF) having the same function (A and B), with sequential number 001, belonging to the substation of area 5310.

5.4 Auxiliary Equipment

5.4.1 The identification of the auxiliary equipment of another main equipment shall be composed of an auxiliary equipment, symbol followed by a hyphen and by the complete identification of the main equipment. Example:

VE-F-2211002

It means:

Fan (VE) of the second (002) furnace (F) of area 2211.

5.4.2 If there are 2 or more identical auxiliary equipment with the same function and connected to the same main equipment, the identification of each of the auxiliary equipment shall be completed by a capital letter, starting with A, following the identification of the main equipment, preceded by a hyphen. Examples:

B-C-5134003A-A

B-C-5134003A-B

It means:

2 identical lubricating pumps (B) with the same function (A and B) of the third (003) compressor (C) of a group of identical compressors with the same function, which belongs to area 5134.

5.4.3 Whenever there are 2 or more auxiliary equipment items, of the same type and connected to the same main equipment, but which are not identical to each other, the identification of each of the auxiliary equipment items shall be completed by 3 numbers from 001 to 999, following the identification of the main equipment and separated by a hyphen.

5.4.3.1 Example 1:

P-C-5134004-01

P-C-5134004-02

It means:

First (01) and second (02) coolers (P) of the fourth (004) compressor (C), which belongs to area 5134.

5.4.3.2 Example 2:

a) B-C-5134001A - Lubricating Oil Pump of compressor 001A of area 5134;

b) B-C-5134001B - Lubricating Oil Pump of compressor 001B of area 5134.

Note: Example 2 should be briefly summarized as: B-C-5134001A/B. **[Recommended Practice]**

5.4.3.3 Example 3:

- a) Identical pumps with the same function:
 - B-C-5134001A-A - Lubricating Oil Pump A of compressor 01A, which belongs to area 5134;
 - B-C-5134001A-B - Lubricating Oil Pump B of compressor 01A, which belongs to area 5134;
- b) Identical pumps with the same function:
 - B-C-5134001B-A - Lubricating Oil Pump A of compressor 01B, which belongs to area 5134;
 - B-C-5134001B-B - Lubricating Oil Pump B of compressor 01B, which belongs to area 5134.

Note: Example 3 should be briefly summarized as: B-C-5134001A/B - A/B. **[Recommended Practice]**

5.4.3.4 Example 4:

- a) different pumps:
 - B-C-5134001A-01 - Pump 01 of compressor 001A, which belongs to area 5134;
 - B-C-5134001A-02 - Pump 02 of compressor 001A, which belongs to area 5134;
- b) different pumps:
 - B-C-5134001B-01 - Pump 01 of compressor 001B, which belongs to area 5134;
 - B-C-5134001B-02 - Pump 02 of compressor 001B, which belongs to area 5134.

Note: Example 4 should be briefly summarized as: B-C-5134001A/B - 01/02. **[Recommended Practice]**

5.4.3.5 Example 5 (different pumps):

- a) identical pumps having the same function:
 - B-C-5134001A-01A - Pump 01A of compressor 001A, which belongs to area 5134;
 - B-C-5134001A-01B - Pump 01B do compressor 001A, which belongs to area 5134;
- b) Identical pumps with the same function:
 - B-C-5134001A-02A - Pump 02A of compressor 001A which belongs to area 5134;
 - B-C-5134001A-02B - Pump 02B of compressor 001A which belongs to area 5134;
- c) Identical pumps with the same function:



- B-C-5134001B-01A - Pump 01A of compressor 001B, which belongs to area 5134;
- B-C-5134001B-01B - Pump 01B of compressor 001B, which belongs to area 5134;
- d) identical pumps with the same function:
 - B-C-5134001B-02A - Pump 02A of compressor 001B which belongs to area 5134;
 - B-C-5134001B-02B - Pump 02B of compressor 001B which belongs to area 5134.

Note: Example 5 should be briefly summarized as: B-C-5134001A/B - 01A/B02A/B.
[Recommended Practice]

5.5 Package Units

5.5.1 The identification of package units as a set shall be made in the same way as for equipment in general, as described in items 3.2 and 5.1, with the symbols of the units indicated in ANNEX A.

5.5.2 Whenever there is an interest in individually identifying the equipment comprising the package unit, their identification shall be composed of the equipment symbol followed by a hyphen and by the identification of the package unit and its sequential number.

5.5.2.1 Example 1:

UC-1231001A/B - 2 Identical Compressor Package Units.

5.5.2.2 Example 2:

- a) C-UC-1231001A - Compressor of Compressor Unit 001A of area 1231;
- b) C-UC-1231001A-A - Compressor A of Compressor Unit 001A of area 1231;
- c) C-UC-1231001A-B - Compressor B of Compressor Unit 001A of area 1231.

5.5.2.3 Example 3 (different vessels):

- a) V-UC-1231001A-01 - Vessel 01 of Compressor Unit 001A of area 1231;
- b) V-UC-1231001A-02 - Vessel 02 of Compressor Unit 001A of area 1231;
- c) V-UC-1231001A-01A - Vessel 01A of Compressor Unit 001A of area 1231;
- d) V-UC-1231001A-01B - Vessel 01B of Compressor Unit 001A of area 1231.

5.5.2.4 Example 4 (different pumps):

- a) B-C-UC-1231001A-01 - Pump 01 of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- b) B-C-UC-1231001A-02 - Pump 02 of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- c) B-C-UC-1231001A-02A - Pump 02A of the Compressor of Compressor Unit 001A, which belongs to area 1231;

- d) B-C-UC-1231001A-02B - Pump 02B of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- e) B-C-UC-1231001A-A-02B - Pump B of Compressor 02B of Compressor Unit 001A, which belongs to area 1231.

5.5.2.5 Example 5:

- a) TS-C-UC-1231001A - Gas turbine of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- b) TS-C-UC-1231001B - Gas turbine of the Compressor of Compressor Unit 001B of area 1231;
- c) TS-C-UC-1231001A-A-B - Turbine B of Compressor A of Compressor Unit 001A, which belongs to area 1231.

6 SECTION CANCELLED - AMENDMENT 04/2008

/ANNEX A

INDEX OF REVISIONS	
REV. A, B, C and D	
There is no index of revisions	
REV. E	
Affected Parts	Description of Alteration
1.3	Revised
1.5	Revised
2	Revised
3.1	Revised
3.2	Revised
3.2.2	Eliminated
4.1.2	Revised
4.4	Revised
5 and 5.1	Included
5.2 to 5.5	Renumbered
ANNEX A	Revised
REV. F	
Affected Parts	Description of Alteration
1.2	Revised
1.3	Revised
4.4	Revised
4.5	Included
5.1 to 5.4	Revised
5.5	Revised and Renumbered
ANNEX A	Revised

(CONTINUATION)

TABLE A-1 - LIST OF EQUIPMENT CLASS SYMBOLS IN ALPHABETICAL ORDER

Symbol	Equipment	Status
CXP	Through-Out Concrete Boxes for Draining and Waste Treatment Purposes	
D	Deaerator	
DA	Decanter, Desander, Clarifier	
DAA	Ventilation Damper (Watertight Dumper)	
DB	Bus Bar Duct	
DE	Electric Draining Equipment	
DF	Fire Damper	
DFG	Gas and Fire Tight Damper	E
DG	Tight Damper	I
DI	Diffuser	
DJ	Circuit Breaker (medium and high voltage and relevant low voltage)	
DL	Desalter	
DM	Damper (modulating and manual)	E
DMT	Modulating Damper	
DR	Regulating Damper	M
DS	Mechanical Disintegrator	
DSP	Overpressure Damper	I
DT	Metal Detector	
E	Ejector, Eductor	
EB	Lifeboat/Rescue Boat/Inflatable Liferaft	
EF	Sphere	
EG	Mist Eliminator	
EI	See Note of item 3.2	
EL	Elevator (including movable ladders for access to ships)	
EP	Fork Lift Truck for Handling Solids (tilting, rotating)	
ES	Extractor (scrap, metals, etc.)	
EX	Extruder	
EXT	Exhauster	
F	Furnace	
FH	Harmonics Filter	I
FL	Flotation Unit	
FLC	Flocculator	
FR	Brake	
FT	Filter	
G	Gas Meter	
GA	Gasifier	
GD	Crane	

(CONTINUE)

FOREWORD

This Standard is the English version (issued in AGO/2005) of Standard PETROBRAS N-1521 REV. F JAN/2005.

1 SCOPE

1.1 This Standard establishes the conditions required for the identification of equipment belonging to industrial facilities of PETROBRAS.

1.2 This Standard applies to industrial equipment belonging to the industrial flow of one of the following areas:

- a) process;
- b) utilities;
- c) interconnections;
- d) pumping or compression facilities;
- e) tank farms;
- f) terminals;
- g) gathering stations;
- h) offshore drilling and production units and other complementary systems.

1.3 This Standard does not apply to measurement and control instruments, which are identified according to standard ISA S 5.1, nor to the identification of piping, which shall comply with standard PETROBRAS N-1522 (except offshore production facilities which are governed by I-ET-3010.00-1200-200-PMT-001).

1.4 This Standard is only applied to works started as of its date of issuance.

1.5 This Standard contains Technical Requirements and Recommended Practices.

2 SUPPLEMENTARY DOCUMENTS

The documents listed below and contain valid requirements for the present Standard.

Portaria nº 3214, de 08/06/1978	- Alterada pela Portaria nº 23, de 27/12/1994 - Norma Regulamentadora nº 13 (NR-13) - Caldeiras e Vasos de Pressão;
PETROBRAS N-1018	- Identificação de Tanque e de Vaso de Pressão;
PETROBRAS N-1278	- Numerals and Letters for Equipment Identification;
PETROBRAS N-1522	- Identificação de Tubulações Industriais;
PETROBRAS N-1710	- Codificação de Documentos Técnicos de Engenharia;
ISA 5.1	- Instrumentation Symbols and Identification Formerly.

- d) B-C-UC-1231001A-02B - Pump 02B of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- e) B-C-UC-1231001A-A-02B - Pump B of Compressor 02B of Compressor Unit 001A, which belongs to area 1231.

5.5.2.5 Example 5:

- a) TS-C-UC-1231001A - Gas turbine of the Compressor of Compressor Unit 001A, which belongs to area 1231;
- b) TS-C-UC-1231001B - Gas turbine of the Compressor of Compressor Unit 001B of area 1231;
- c) TS-C-UC-1231001A-A-B - Turbine B of Compressor A of Compressor Unit 001A, which belongs to area 1231.

6 BIBLIOGRAPHY

- I-ET-3010.00-1200-200-PMT-001 - Piping Standard and Material for Oil Production and Process Facilities.

/ANNEX A

AMENDED SHEET IN 04/2008
DO NOT USE