

PETRONAS TECHNICAL STANDARDS

INDEX TO PTS

PTS 00.00.05.05

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PTS Update

This revision of PTS **00.00.05.05 – Index to PTS Publication (December 2011)** has been updated to incorporate PETRONAS Lessons Learnt, Best Practice and new information issued by relevant industry code and standards.

The previous version of this PTS **00.00.05.05 (March 2011)** will be removed from PTS binder / e-repository from herein onwards.

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Revision History

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PREFACE

PETRONAS Technical Standards (PTS) publications reflect the views, at the time of the publication, of PETRONAS OPU/ Divisions.

They are based on the experience acquired during the involvement with the design, construction, operation and maintenance of processing units and facilities. Where appropriate they are based on, or references are made to, national and international standards and codes of practice.

The objective is to set the recommended standard for good technical practice to be applied by PETRONAS' OPU in oil and gas production facilities, refineries, gas processing plants, chemical plants, marketing facilities or any other such facility, and thereby to achieve maximum technical and economic benefit and requirements.

The information set forth in these publications is provided to users for their consideration and decision to implement. This is of particular importance where PTS may not cover every requirement or diversity of condition at each locality. The system of PTS is expected to be sufficiently flexible to allow individual operating units to adapt the information set forth in PTS to their own environment and requirements.

When Contractors and Manufacturers/ Suppliers use PTS they shall be solely responsible for the quality of work and the attainment of the required design and engineering standards. In particular, for those requirements not specifically covered, the Principal will expect them to follow those design and engineering practices which will achieve the same level of integrity as reflected in the PTS. If in doubt, the Contractor or Manufacturer/ Supplier shall, without detracting from his own responsibility, consult the Principal or its technical advisor.

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- 1) PETRONAS and its affiliates.
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TABLE OF CONTENTS

1.	INTRODUCTION	5
1.1	SCOPE	5
1.2	TYPES OF PTS	5
1.3	STANDARD SPECIFICATIONS	5
1.4	REQUISITIONS AND STANDARD FORMS	5
1.5	DISTRIBUTION OF PTSS	5
1.6	AMENDMENTS	6
PART I	SUBJECT INDEX	7
1.	GENERAL ENGINEERING SUBJECTS	7
1.1	INDICES	7
1.2	GENERAL	7
2.	MECHANICAL ENGINEERING	9
2.1	GENERAL	9
2.2	EQUIPMENT	9
2.3	CONSTRUCTION MATERIALS	14
2.4	WELDING, GENERAL	16
2.5	MAINTENANCE AND INSPECTION	16
2.6	OFFSHORE APPLICATIONS	16
3.	INSTRUMENT ENGINEERING AND TELECOMMUNICATIONS	17
4.	ELECTRICAL ENGINEERING	21
5.	CIVIL ENGINEERING (including steel structures)	22
6.	SURFACE PROTECTION (coatings, linings and cathodic protection)	24
7.	SAFETY AND FIRE FIGHTING	24
8.	DRILLING AND PRODUCTION	26
PART II	NUMERICAL INDICES	28
1.	PTS	28

1. INTRODUCTION

1.1 SCOPE

This index lists the PTS (PETRONAS Technical Standards) in circulation on the date of issue of this index. They are listed both by subject type and numerically. In the numerical indices (Part II, sections 1 and 2).

This index replaces the previous index dated January 2005 and changes have been highlighted in red in the numerical index (Part II, section 1).

1.2 TYPES OF PTS

MANUAL Designated "M"

Manuals aim to give guidance for the way a particular aspect is to be approached, and the resultant practice or method is outlined.

TECHNICAL SPECIFICATION Designated "T"

Technical specifications aim mainly at a basis for understanding between the Principal, Contractor and Supplier providing detailed requirements to be satisfied by a product, a material or a process and indicating the criteria to judge compliance.

PROCEDURAL SPECIFICATION Designated "P"

Procedural specifications aim at describing formalised ways of doing things to achieve a sound result.

NOTE: The above designations are shown for each active PTS in the 4th column of the numerical section of this index (Part II).

REQUISITION

Requisitions provide the engineering information required for the procurement of equipment and materials.

STANDARD FORM

Standard forms are documents used to present information in a consistent manner.

1.3 STANDARD SPECIFICATIONS

Standard Specifications have all been withdrawn and, where relevant, replaced by PTS.

1.4 REQUISITIONS AND STANDARD FORMS

Requisition sheets are indexed in PTS 30.10.01.10

Standard Forms are indexed in PTS 00.00.10.05

1.5 DISTRIBUTION OF PTS

The primary, but not exclusive, users of active PTS are shown in the 5th column of the numerical indices. The coding is as follows:

'G' for Central Offices and Group Companies

'C' for Central Offices, Group Companies and their nominated contractors

'F' for Central Offices, Group Companies, their nominated contractors and nominated manufacturers.

NOTES: 1. The above codings were used in the previous PTS distribution system to determine automatic distribution of a PTS. They were not, and are not, meant to restrict distribution when a PTS is requested to be provided.

2. This coding system was discontinued in April 2003

The PTS documents are available in AXIS – PETRONAS Technical Standard.

pww.axis.petronas.com.my

The Group Company is responsible for copying or printing any paper copies that may be needed.

The Group Company is responsible for providing PTS to their Contractors and Manufacturers but PETRONAS can provide PTS directly to Contractors and Manufacturers for an administrative fee.

1.6 AMENDMENTS

Between formal revisions, if an amendment is required to a PTS, a "PTS Circular" is issued. These circulars are numbered x/y, where "x" is the year and "y" is the sequential number in which it was issued.

The 6th column of the numerical section (Part II, section 1) of this index identifies whether a PTS has been so amended.

PART I SUBJECT INDEX

1. GENERAL ENGINEERING SUBJECTS

1.1 INDICES

Title	PTS Number
Index to PTS	PTS 00.00.05.05
Standard drawings index	PTS 00.00.06.06
Standard forms index	PTS 00.00.10.05
Index to requisitions	PTS 30.10.01.10

1.2 GENERAL

Title	PTS Number
PTS Publications	PTS 00.00.00.30-P
Content and drafting of a functional specification, and a technical specification, and the classification of products, processes and services (endorsement of ISO 13879, ISO 13880 and ISO/TR 13881)	PTS 00.00.07.30
The use of SI quantities and units (endorsement of ISO 31 and ISO 1000)	PTS 00.00.20.10
Definition of temperature, pressure and toxicity levels	PTS 01.00.01.30
Preparation of process flow schemes and process engineering flow schemes	PTS 01.00.02.11
Preparation of safeguarding memoranda and process safeguarding flow schemes	PTS 01.00.02.12
Asset breakdown for onshore facilities	PTS 01.00.09.10
Steam injection systems for safeguarding thermal cracking units	PTS 10.02.51.11
Basic data and phase behaviour methods	PTS 20.00.10.10
Glycol-type gas dehydration systems	PTS 20.04.10.10
Acid Gas Removal Unit Utilising Solvent	PTS 20.04.60.10
Mercury Measurement	PTS 20.10.50.46
Sampling for Mercury Analysis in Various Medium	PTS 20.10.90.45
Corrosion Management	PTS 30.00.10.39
Human factors engineering in projects	PTS 30.00.60.10
Human factors engineering - investment justification model	PTS 30.00.60.12
Human factors engineering - valve analysis	PTS 30.00.60.13
Human factors engineering - application during construction	PTS 30.00.60.14
Human factors engineering - human/machine interface and control room design	PTS 30.00.60.15

Index to Requisition	PTS 30.10.01.10
Plant model construction and review	PTS 30.10.05.11
PETRONAS risk based inspection PRBI implementation	PTS 30.27.10.30
Coding system for the administration and control of capital projects	PTS 40.10.01.11
Spare parts	PTS 70.10.90.11
Radiographic inspection	PTS 71.00.08.30
Ultrasonic Examination	PTS 71.00.08.31
Area classification (amendments/supplements to IP 15)	PTS 80.00.10.10
Project quality assurance	PTS 82.00.10.10
Cost control of capital investment projects	PTS 82.00.10.11

2. MECHANICAL ENGINEERING

2.1 GENERAL

Title	PTS Number
Heat transfer fluid (HTF) systems	PTS 20.05.50.10
Fuel systems	PTS 20.05.60.10
Equipment in LPG installations	PTS 30.06.10.11
Pressurised bulk storage installations for LPG	PTS 30.06.10.12
LPG bulk transfer and transportation	PTS 30.06.10.13
ESD systems for loading and discharging refrigerated and pressurised LNG and LPG carriers	PTS 30.06.10.20
Glass lined steel equipment and piping	PTS 30.48.70.30
Chemical injection facilities	PTS 31.01.10.10
Loading facilities for bulk road vehicles	PTS 31.06.11.11
Symbols and identification system – Mechanical	PTS 31.10.03.10
Gaseous oxygen systems	PTS 31.10.11.31
Instrument air supply	PTS 31.37.00.11
Diesel oil systems in oil and gas production facilities	PTS 37.05.10.11

2.2 EQUIPMENT

2.2.1 General/noise/safety relief systems

Title	PTS Number
Noise control (amendments/ supplements to ISO 15664)	PTS 31.10.00.31
Fabric expansion joints	PTS 31.24.40.12
Filters for removing particles from hydroprocesser feeds - type selection and design rules	PTS 31.27.21.10
Dry electrostatic precipitators	PTS 31.27.21.30
Steam jet vacuum ejector sets	PTS 31.29.56.31
Hydraulic systems for remote operation of shut-off valves	PTS 31.36.10.30
PTFE bellows	PTS 31.38.82.31
Acoustic insulation for piping	PTS 31.46.00.31
Relief valves - selection, sizing and specification	PTS 80.36.00.30
Design of pressure relief, flare and vent systems	PTS 80.45.10.10
Interlocking systems for safety/relief valves	PTS 80.46.30.11

2.2.2 Boilers/ furnaces

Title	PTS Number
Water-tube boilers installation	PTS 30.75.10.30
Gas turbine heat recovery steam generators	PTS 30.75.10.31
Fired heaters, including waste heat boilers (amendments/supplements to ISO 13705)	PTS 31.24.00.30
Calculation of heater-tube thickness (endorsement of ISO 13704)	PTS 31.24.00.31

2.2.3 Heat exchangers

Title	PTS Number
Fouling resistances for heat transfer equipment	PTS 20.21.00.31
Printed circuit heat exchangers - Selection and application	PTS 31.21.01.11
Shell-and-tube heat exchangers (amendments/supplements to ISO 16812)	PTS 31.21.01.30
Selected construction materials for shell-and-tube heat exchangers	PTS 31.21.01.31
Plate and frame heat exchangers (amendments/supplements to ISO 15547)	PTS 31.21.01.32
Printed circuit heat exchangers - Design and fabrication	PTS 31.21.01.33
Air-cooled heat exchangers (amendments/supplements to ISO 13706)	PTS 31.21.70.31

2.2.4 Vessels/columns/reactors

Title	PTS Number
Internals for columns	PTS 31.20.20.31
Pressure Vessel – ASME – Data Sheet for Manufacturer's Standard Pressure Vessel	PTS 31.22.00.96
Pressure Vessel – ASME – Data Sheet for Minimum Service Pressure Vessel	PTS 31.22.00.97
Rotating disc contactors	PTS 31.22.01.31
Gas/liquid separators - Type selection and design rules	PTS 31.22.05.11
Liquid/liquid and gas/liquid/liquid (three-phase) separators - Type selection and design rules	PTS 31.22.05.12
Pressure vessels (amendments/supplements to PD 5500)	PTS 31.22.10.32
Manufacturing report for pressure vessels	PTS 31.22.10.35
Unfired pressure vessels (amendments/supplements to EN 13445)	PTS 31.22.11.32
Pressure vessels (Based on ASME section VIII)	PTS 31.22.20.31
Glass-fibre reinforced epoxy, polyester and vinyl ester vessels and tanks	PTS 31.22.30.14

Materials and fabrication requirements for Cr-Mo heavy wall pressure vessels (amendments/supplements to API RP 934)	PTS 30.10.02.32
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2.2.5 Rotating equipment

Title	PTS Number
Hoisting facilities and weather protection for rotating equipment	PTS 31.25.00.10
Installation of rotating equipment (amendments/supplements to API RP 686)	PTS 31.29.00.10
Oil mist lubrication systems	PTS 31.29.00.30
Petroleum and natural gas industries - high-speed special-purpose gear units (amendments/supplements to ISO 13691)	PTS 31.29.00.32
Shaft sealing systems for centrifugal and rotary pumps (amendments/supplements to API 682)	PTS 31.29.00.33
Dry gas seal systems for centrifugal compressors	PTS 31.29.00.34
Flexible couplings for mechanical power transmission - special purpose applications (amendments/ supplements to ISO 10441 and ISO 14691)	PTS 31.29.00.36
Pumps - type selection	PTS 31.29.02.11
Centrifugal pumps (amendments/supplements to ISO 13709)	PTS 31.29.02.30
Centrifugal submerged motor pumps (in refrigerated product or pressurised storage service)	PTS 31.29.06.30
Seawater lift pumps	PTS 31.29.06.31
Reciprocating positive displacement pumps and metering pumps (amendments/supplements to API 674 and API 675)	PTS 31.29.12.30
Compressors - Selection, testing and installation	PTS 31.29.40.10
Centrifugal and axial compressors (amendments/supplements to API Std 617)	PTS 31.29.40.30
Reciprocating compressors (amendments/supplements to API 618)	PTS 31.29.40.31
Rotary-type positive displacement compressors (amendments/supplements to API 619)	PTS 31.29.40.32
Packaged, integrally geared, centrifugal plant and instrument air compressors (amendments/supplements to API Std 672)	PTS 31.29.40.33
Liquid ring vacuum pumps and compressors (amendments/supplements to API 681)	PTS 31.29.42.30
Centrifugal fans (amendments/supplements to API 560, Appendix E)	PTS 31.29.47.30
Steam turbines - Selection, testing and installation	PTS 31.29.60.10
General-purpose steam turbines (amendments/supplements to API Std 611)	PTS 31.29.60.30
Special-purpose steam turbines (amendments/supplements to API Std 612)	PTS 31.29.60.31
Lubrication, shaft-sealing and control oil systems and auxiliaries for petroleum, chemical and gas industry services (amendments/supplements to API 614)	PTS 31.29.60.32
Combustion gas turbines - Selection, testing and installation	PTS 31.29.70.11
Combustion gas turbines (amendments/supplements to API 616)	PTS 31.29.70.31
Gas turbine combustion air intake and exhaust systems	PTS 31.29.70.32
Diesel engines	PTS 31.29.80.30

Spark ignited gas fuelled engines

PTS 31.29.90.30

2.2.6 Piping and pipelines

Title	PTS Number
Side-entry mixers for storage tanks & vessels	PTS 31.51.10.31
Fabrication of heater piping	PTS 31.24.49.31
Pipeline transportation systems - pipeline valves (amendments/supplements to API specification 6D/ISO 14313)	PTS 31.36.00.30
Piping classes - basis of design	PTS 31.38.01.10
Piping - general requirements	PTS 31.38.01.11
Piping classes - refining and chemicals	PTS 31.38.01.12
Piping classes – refining and chemical class 150	PTS 31.38.01.12A
Piping classes – refining and chemical class 300	PTS 31.38.01.12B
Piping classes – refining and chemical class 600	PTS 31.38.01.12C
Piping classes – refining and chemical class 900	PTS 31.38.01.12D
Piping classes – refining and chemical class 1500	PTS 31.38.01.12E
Piping classes – refining and chemical class 2500	PTS 31.38.01.12F
Compilation of bill of material for piping isometrics	PTS 31.38.01.13
Piping classes - exploration and production	PTS 31.38.01.15A
Piping classes - exploration and production class 150	PTS 31.38.01.15B
Piping classes - exploration and production class 300	PTS 31.38.01.15C
Piping classes - exploration and production class 600	PTS 31.38.01.15D
Piping classes - exploration and production class 900	PTS 31.38.01.15E
Piping classes - exploration and production class 1500	PTS 31.38.01.15F
Piping classes - exploration and production class 2500	PTS 31.38.01.15G
Compilation of a specification for piping systems	PTS 31.38.01.21
Pipe supports	PTS 31.38.01.29
Shop and field fabrication of steel piping	PTS 31.38.01.31
Standard Form: Piping Classes – Services and Materials Selection Index	PTS 31.38.01.84
Protective steam heating of piping systems	PTS 31.38.30.11
Hot-tapping on pipelines, piping and equipment	PTS 31.38.60.10
Pipeline engineering	PTS 31.40.00.10
Corrosion mitigation strategy for wet sour gas carbon steel pipelines	PTS 31.40.00.19
Riser design	PTS 31.40.10.10
Design of multiple-pipe slug catchers	PTS 31.40.10.12
Design of pipeline pig trap systems	PTS 31.40.10.13
Pipeline overpressure protection	PTS 31.40.10.14
Analysis of spans for submerged pipelines	PTS 31.40.10.15

Upheaval buckling of pipelines	PTS 31.40.10.16
Pipeline/ trawlgear interaction	PTS 31.40.10.17
Glass-fiber reinforced plastic pipeline and piping system	PTS 31.40.10.19
Spoolable fibre-reinforced plastic pipes	PTS 31.40.10.20
CRA clad or lined steel pipe (amendments/supplements to API Spec 5LD)	PTS 31.40.20.32
Linepipe induction bends (amendments/supplements to ISO 15590-1)	PTS 31.40.20.33
Welded and seamless duplex and super duplex stainless steel line pipe (amendments/supplements to API Spec 5LC)	PTS 31.40.20.34
Linepipe for non-critical service (amendments/supplements to ISO 3183-1)	PTS 31.40.20.35
Weldable martensitic stainless steel line pipe for use in oil and gas operations (amendments/supplements to API Spec 5LC)	PTS 31.40.20.36
Linepipe for critical service (amendments/supplements to ISO 3183-3)	PTS 31.40.20.37
Pipeline fittings (amendments/supplements to ISO 15590-2)	PTS 31.40.21.30
Pipeline isolating joints (amendments/supplements to MSS SP-75)	PTS 31.40.21.31
Pig signallers: Intrusive type	PTS 31.40.21.33
Carbon and low alloy steel pipeline flanges for use in oil and gas operations (amendments/supplements to MSS SP-44)	PTS 31.40.21.34
Thermoplastic lined pipelines	PTS 31.40.30.34
Hydrostatic pressure testing of new pipelines	PTS 31.40.40.38
Precommissioning of pipelines	PTS 31.40.50.30
Pipeline leak detection	PTS 31.40.60.11
Pipeline Repairs	PTS 31.40.60.12
Quarter-turn on/off actuators	PTS 31.40.70.30
Corrosion-resistant alloy seamless tubes for use as casing, tubing and coupling stock - technical delivery conditions (endorsement of ISO 13680)	PTS 39.01.20.30
Care and use of casing and tubing (endorsement of ISO 10405)	PTS 39.01.20.31
Shop and field fabrication of orifice meter runs	PTS 61.38.10.10
Welding of pipelines and related facilities (amendments/supplements to ANSI/ API STD 1104)	PTS 61.40.20.30
Field welding of duplex and super duplex stainless steel pipelines (amendments/supplements to API 1104)	PTS 61.40.20.31

2.3 CONSTRUCTION MATERIALS

Title	PTS Number
Metallic materials - selected standards	PTS 30.10.02.11
Non-metallic materials - selection and application	PTS 30.10.02.13
Metallic materials - prevention of brittle fracture	PTS 30.10.02.31

Materials for high-temperature conversion process furnace parts

PTS 31.24.40.31

2.4 WELDING, GENERAL

Title	PTS Number
Welding of metals (amendments/supplements to API RP 582)	PTS 30.10.60.18
Welding on pressurised pipes (amendments/supplements to ANSI/API RP 1107)	PTS 30.10.60.30
Oxidation of stainless steel weldments	PTS 30.10.60.31

2.5 MAINTENANCE AND INSPECTION

Title	PTS Number
Selection of Materials for LifeCycle Performance (EP) – Upstream Equipment	PTS 39.01.10.12
Field inspection prior to commissioning of mechanical equipment	PTS 61.10.08.11
Equipment and tools for maintenance	PTS 70.08.10.11
Mechanical maintenance equipment, tools and bolt tensioning	
Equipment and tools for maintenance and inspection	
– Electrical workshop - Test equipment and tools	PTS 70.08.10.13
– Equipment record cards	PTS 70.10.01.10
The preservation of old and new equipment and piping standing idle	PTS 70.10.70.11
Cleaning of equipment	PTS 70.10.80.11
Inspection Manual for Offshore Platform and Associated Equipment	PTS 71.27.08.19

2.6 OFFSHORE APPLICATIONS

Title	PTS Number
Telecommunications for offshore platforms	PTS 32.71.00.12
Diesel oil systems in oil and gas production facilities	PTS 37.05.10.10
Design of hose bulk transfer facilities for offshore installations	PTS 37.05.10.12
Site specific assessment of mobile offshore jack-up units (amendments/supplements to the SNAME guideline and recommended practice)	PTS 37.11.00.30
Drain systems for offshore installations	PTS 37.14.10.10
Offshore Buildings	PTS 37.17.01.40
Design of offshore living quarters	PTS 37.17.10.10
Design of offshore temporary refuges	PTS 37.17.10.11

Design of steel substructures for fixed offshore platforms (amendments/supplements to API RP 2A-LRFD)	PTS 37.19.00.30
Marine Safety of Mobile Offshore Installations	PTS 37.19.10.20
Design for Offshore Steel Structures exposed to Accidental Loads	PTS 37.19.10.21
Weldable structural steels for fixed offshore structures (amendments/ supplements to EN 10225 and EN 10025)	PTS 37.19.10.30
Helidecks on Fixed and Mobile Offshore Structures	PTS 37.19.10.31
Structural inspection of offshore installations	PTS 37.19.60.10
Offshore Structures Engineering	PTS 37.19.60.20
Firewater pumps for offshore installations	PTS 37.29.01.10
Subsea production systems	PTS 37.80.00.30
Mooring of mobile units	PTS 37.91.10.11
Oil loading and discharge hoses for offshore mooring installations (amendments/supplements to OCIMF Guide)	PTS 37.91.20.30
Pedestal cranes (amendments/supplements to API Spec 2C)	PTS 37.92.10.30
Pedestal cranes (amendments/supplements Lloyd's code and BS 2573)	PTS 37.92.10.31
Offshore facilities life-saving appliance requirements (amendments/supplements to SOLAS)	PTS 80.80.00.10

2.7 Others

Title	PTS Number
Deoiling industrial wastewater design and operation of corrugated plated interceptor (CPI)	PTS 10.05.10.30
Property package selection	PTS 20.00.10.37
Advanced process control implementation guide	PTS 20.00.20.39
Crude oil analysis and characterization techniques	PTS 20.02.10.38
Separator modeling techniques	PTS 20.22.10.39
Liquid – liquid extraction column modeling	PTS 20.27.10.34
Ordinary distillation column modeling	PTS 20.27.10.35
Reboiled absorber column modeling	PTS 20.27.10.36
Refluxed absorber column modeling	PTS 20.27.10.37
Shortcut distillation column modeling	PTS 20.27.10.38
Absorber column modeling	PTS 20.27.10.39
Minimum requirements for implementation of non-routine critical activities	PTS 31.00.10.10
Brazed aluminium plate-fin heat exchangers (amendments/ supplements to ISO 15547-2)	PTS 31.21.01.34