### 1) TBS/ MEDC 11 (453) P3 /ISO 13709:2009

Title: Centrifugal pumps for petroleum, petrochemical and natural gas industries.

**Scope:** This International Standard specifies requirements for centrifugal pumps, including pumps running in reverse as hydraulic power recovery turbines, for use in petroleum, petrochemical and gas industry process services.

This International Standard is applicable to overhung pumps, between-bearings pumps and vertically suspended pumps (see Table 1). Clause 9 provides requirements applicable to specific types of pump. All other clauses of this International Standard are applicable to all pump types.

## 2) TBS/ MEDC 11 (455) P3 / ISO 13710:2004

**Title:** Petroleum, petrochemical and natural gas Industries – reciprocating positive displacement pumps

**Scope:** This International Standard specifies requirements for reciprocating positivedisplacement pumps and pump units for use in the petroleum, petrochemical and natural gas industries. It is applicable to both direct-acting and power-frame types.

## 3) TBS/ MEDC 11 (457) P3/ISO 10790:2015

**Title**: Measurement of fluid flow in closed conduits — Guidance to the selection, installation and use of Coriolis flowmeters (mass flow, density and volume flow measurements

**Scope**: This International Standard gives guidelines for the selection, installation, calibration, performance, and operation of Coriolis flowmeters for the measurement of mass flow and density. This International Standard also gives appropriate considerations regarding the type of fluids measured, as well as guidance in the determination of volume flow and other related fluid parameters.

#### 4) TBS/ MEDC 11 (459) P3/ISO 20456:2017

**Title:** Measurement of fluid flow in closed conduits — Guidance for the use of electromagnetic flow meters for conductive liquids.

**Scope:** This document applies to industrial electromagnetic flowmeters used for the measurement of flowrate of a conductive liquid in a closed conduit running full. It covers flowmeter types utilizing both alternating current (AC) and pulsed direct current (DC) circuits to drive the field coils and meters running from a mains power supply and those operating from batteries or other sources of power.

## 5) TBS/ MEDC 11 (466) P3/ ISO 14511:2019

Title: Measurement of fluid flow in closed conduits — Thermal mass flowmeters.

**Scope:** This document gives guidelines for the specification, testing, inspection, installation, operation and calibration of thermal mass gas flowmeters for the metering of gases and gas

mixtures. It is not applicable to measuring liquid mass flowrates using thermal mass flowmeters.

### 6) TBS/ MEDC 02 (587) P3/ISO 17632:2015

**Title:** Welding consumables — Tubular cored electrodes for gas shielded and non-gas shielded metal arc welding of non-alloy and fine grain steels — Classification.

**Scope:** This International Standard specifies requirements for classification of tubular cored electrodes with or without a gas shield for metal arc welding of non-alloy and fine grain steels in the as-welded condition or in the post-weld heat-treated condition with minimum yield strength of up to 500 MPa or a minimum tensile strength of up to 570 MPa. One tubular cored electrode can be tested and classified with different shielding gases, if any.

This International Standard is a combined specification providing classification utilizing a system based upon the yield strength and the average impact energy of 47 J of all-weld metal or utilizing a system based upon the tensile strength and the average impact energy of 27 J of all-weld metal.

## 7) TBS/ MEDC 02 (588) P3/ISO 17633:2017

**Title:** Welding consumables — Tubular cored electrodes and rods for gas shielded and nongas shielded metal arc welding of stainless and heat-resisting steels — Classification.

**Scope:** This document specifies requirements for classification of tubular flux and metal cored electrodes and rods, based on the all-weld metal chemical composition, the type of core, shielding gas, welding position and the all-weld metal mechanical properties, in the as-welded or heat-treated conditions, for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels.

This document is a combined standard providing for classification utilizing a system based upon nominal composition or utilizing a system based upon alloy type.

## 8) TBS/ MEDC 02 (589) P3/ISO 6847:2020

Title: Welding consumables — Deposition of a weld metal pad for chemical analysis.

**Scope:** This document specifies the procedure to be used for deposition of a weld metal pad for chemical analysis.

This document applies to deposition of a weld metal pad by use of covered electrodes, wire electrodes for gas shielded metal arc welding, tubular cored electrodes for gas shielded metal arc welding, solid rods and tubular cored rods for gas tungsten arc welding, and wire-flux and strip-flux combinations for submerged arc welding or electroslag welding and cladding.

This document is applicable to welding consumables for non-alloy and fine grain steels, high strength steels, creep-resisting steels, stainless and heat-resisting steels, nickel and nickel alloys, and copper and copper alloys.

#### 9) TBS/ MEDC 02 (590) P3/ ISO 6947:2019

Title: Welding and allied processes — Welding positions.

**Scope:** This document defines welding positions for testing and production, for butt and fillet welds, in all product forms.

Annex A gives examples of the limits of the slope of a weld axis and the rotation of the weld face about the weld axis for welding positions in production welds.

Annex B gives a comparison of this document and US designation systems for welding positions.

#### 10) TBS/ MEDC 02 (398) P3/ISO 1461:2009

Title: Hot dip galvanized coatings on fabricated iron and steel articles.

**Scope:** This International Standard specifies the general properties of coatings and test methods for coatings applied by dipping fabricated iron and steel articles (including certain castings) in a zinc melt (containing not more than 2 % of other metals). It does not apply to the following:

a) sheet, wire and woven or welded mesh products that are continuously hot dip galvanized;b) tube and pipe that are hot dip galvanized in automatic plants;

c) hot dip galvanized products (e.g. fasteners) for which specific standards exist and which might include additional requirements or requirements which are different from those of this International Standard.

NOTE Individual product standards can incorporate this International Standard for the coating by quoting its number, or can incorporate it with modifications specific to the product. Different requirements can also be made for galvanized coatings on products intended to meet specific regulatory requirements.

After-treatment/over-coating of hot dip galvanized articles is not covered by this International Standard.

#### 11) TBS/ MEDC 02 (397) P3/ ISO 671:1982 - Confirmed 2020 (Rev. TZS 14:2009)

Title: Steel and cast iron — Determination of sulphur content — Combustion titrimetric

method.

**Scope:** This International Standard specifies a titrimetric method for the determination of sulphur in steel and cast iron, after combustion of the test portion in a current of oxygen.

#### 12) TBS/ MEDC 02 (377) P3/ISO 2408:2017

**Title:** Steel wire ropes — Requirements.

**Scope:** This document specifies requirements for the manufacture, testing, acceptance, packing, marking and issuing of a certificate of quality of wire ropes. It is applicable to round

strand ropes and compacted strand ropes made from wires ropes that are uncoated (bright), zinc-coated or Zn-Al coated.

It is not applicable to ropes for

- mining purposes,
- aircraft control,
- aerial ropeways and funiculars, and
- lifts.

#### 13) TBS/ MEDC 9 (367) P3/ISO TS 11155-1:2001

**Title:** Road vehicles - Air filters for passenger Compartments - Part 1: Test for particulate filtration.

**Scope:** This part of ISO/TS 11155 specifies a particulate filtration test, including the critical characteristics of equipment, test procedure and report format, for the consistent assessment of filter elements in a laboratory test rig with particle sizes larger than 0,3  $\mu$ m. It is applicable to filters for removing particulate matter from external or recirculated air used for ventilating motor vehicle passenger compartments or cabins.

The test specified in this part of ISO/TS 11155 enables an assessment of filter elements for pressure loss, fractional filtration efficiency and accelerated particulate holding capability against standardized laboratory particulate challenges. Because the test methods exclude the full range of possible particulate challenges and environmental effects, the relative ranking of filters may change in service.

NOTE 1 Absolute comparability is only possible with filter elements of the same shape and size as well as the same position in the test duct.

NOTE 2 Subject to agreement between supplier and the customer, the test procedure allows for the calculation of gravimetric efficiency as a single parameter for quality control purposes. For gravimetric efficiency tests refer to ISO 5011.

#### 14) TBS/ MEDC 9 (368) P3/ISO TS 11155-2:2001

**Title:** - Road vehicles - Air filters for passenger compartments - Part 2: Test for gaseous filtration

**Scope:** This part of ISO 11155 specifies a test comprising several methods for measuring the dynamic gas adsorption of air filters in the passenger compartments of road vehicles. These laboratory test methods are applicable to air filters that improve air quality by reducing concentrations of gaseous, odorous or hazardous components from ambient or re-circulated air, or both, in the vehicle cabin. They provide a means of measuring air pressure loss, as well as gas and vapour removal characteristics.

### 15) TBS/ MEDC 12 (50) P3/ ISO 17831-1:2015

**Title**: - Solid biofuels - Determination of mechanical durability of pellets and briquettes - Part 1: Pellets.

**Scope:** This part of ISO 17831 defines a determination method for testing the mechanical durability of pellets. The mechanical durability is a measure of the resistance of compressed fuels towards shocks and/or abrasion as a consequence of handling and transportation.

### 16) TBS/ MEDC 12 (52) P3/ ISO 17831-2:2015

**Title:** - Solid biofuels - Determination of mechanical durability of pellets and briquettes - Part 2: Briquettes.

**Scope:** This part of ISO 17831 defines a method for determining the mechanical durability of briquettes. The mechanical durability is a measure of the resistance of compressed fuels against shocks and/or abrasion as a consequence of handling and transportation.

#### 17) TBS/ MEDC 12 (55) P3/ ISO 19867-1:2018

**Title: -** Clean cook stoves and clean cooking solutions -Harmonized laboratory test protocols - Part 1: Standard test sequence for emissions and performance, safety and durability.

**Scope:** This document is applicable to cookstoves used primarily for cooking or water heating in domestic, small-scale enterprise, and institutional applications, typically with firepower less than 20 kW and cooking vessel volume less than 150 l, excluding cookstoves used primarily for space heating. For solar cookstoves, the provisions of this document are applicable only for evaluating cooking power, safety, and durability. Solar cookstoves have zero on-site emissions, and their cooking power can be determined according to ASAE S 580.1. This document does not cover electric stoves. Safety evaluation of electric stoves can be found in IEC 60335-2-6[62].

This document specifies laboratory measurement and evaluation methods for

a) particulate and gaseous air pollutant emissions,

b) energy efficiency,

c) safety, and

d) durability of cookstoves.

This document does not include evaluation of off-gassing from manufacturing oils, coatings, adhesives, and other materials (which can be found in ISO 10377 and ISO 14159). This document does not include evaluation of safety for cookstoves designed to burn a liquid and/or gaseous fuel, such as LPG (liquefied petroleum gas), alcohol, plant oil, kerosene, etc. Safety evaluation of gas-fuelled cookstoves can be found in ISO 23550 and ISO 23551 (all parts). This document does not include durability evaluation of rechargeable batteries in fan-assisted cookstoves. This document provides a standard test sequence to establish international comparability in measurement of cookstove emissions and efficiency. Guidelines for reporting results from the laboratory measurement and evaluation methods are described. For cookstoves used in applications covered by additional requirements (e.g., local air quality and safety regulations), additional test conditions and special evaluation methods may apply.

#### 18) TBS/ MEDC 12 (56) P3/ ISO 19869:2019

Title: - Clean cook stoves and clean cooking solutions - Field testing methods for cookstoves.

**Scope:** This document provides field testing methods to evaluate cooking system performance in real-world conditions.

This document is intended to:

a) Provide quantitative and qualitative measurements of cooking system performance. Requirements and guidance are provided for evaluation of usage, usability, fuel consumption, energy consumption, power, emissions, safety, and durability. These measurements include uncontrolled and controlled cooking tests.

b) Provide guidance for measurements of household air pollution and personal exposure to PM2,5 and CO.

c) Provide guidance for field assessments that compare cooking system performance metrics either to defined performance levels or to a counterfactual scenario that enables assessment of whether the new cooking system is improved compared to what would have been observed without the implementation of a new cooking system.

d) Provide guidance for prioritizing measurements that balance comprehensiveness and feasibility.

The parts of the cooking system include the cookstove, cooking vessel, fuel, user practice, and additional cooking devices (such as pot skirts and retained heat cookers). Several measurements in this document are presented as measurements of "cookstoves" or "cooking devices" for simplicity, but are intended to be interpreted as measurements of cooking systems. Some measurements (usage, kitchen energy consumption, and pollutant exposure) pertain to household-level cooking systems that include all cookstoves, cooking devices, fuels, and user practices in a household. Cooking systems can also include other aspects of the cooking environment (such as ventilation when measuring exposure).

This document is applicable to cookstoves used primarily for cooking or water heating in domestic, small-scale enterprise and in institutional applications, typically with firepower less than 20 kW and cooking vessel volume less than 150 l. The provisions of this document are applicable to solar cookers. This document does not cover electric stoves or cookstoves used primarily for space heating. Although some parts of this document can be applicable to electric stoves (usage, usability, safety, durability, cooking power, and household energy consumption), specific considerations required for testing electric stoves are not provided.

This document is intended for manufacturers, implementing organizations, researchers, governments, or other entities that need to evaluate cooking system performance in the field.